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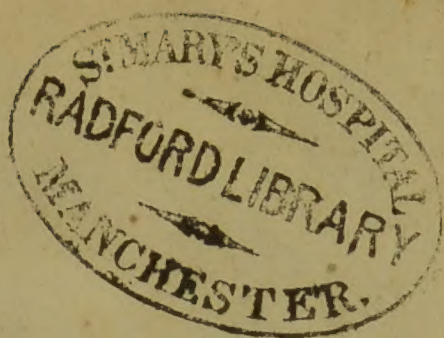
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DISCOURSES

ON THE

MANAGEMENT OF INFANTS,

AND THE

TREATMENT OF THEIR DISEASES.

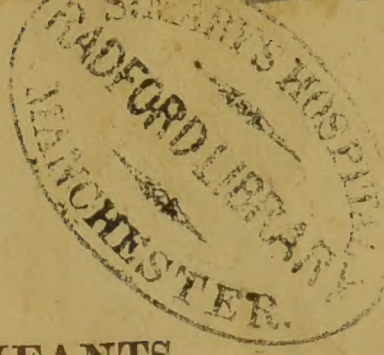
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DISCOURSES
ON THE
MANAGEMENT OF INFANTS
AND THE
TREATMENT OF THEIR DISEASES.

WRITTEN
IN A PLAIN FAMILIAR STYLE,
TO RENDER THEM
INTELLIGIBLE AND USEFUL TO ALL MOTHERS.

By JOHN HERDMAN, M.D.

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS, LONDON;
OF THE MEDICAL SOCIETY, EDINBURGH;
AND ONE OF THE PHYSICIANS OF THE CITY DISPENSARY.

O crime! with herbs and drugs of essence high,
The sacred fountains of the breast to dry!
Pour back on nature's self the balmy tide
Which nature's God for infancy supplied!

ROSCOE.

London:

Printed by RUFFY and EVANS, 29, Budge Row, Wallbrook,
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1807.



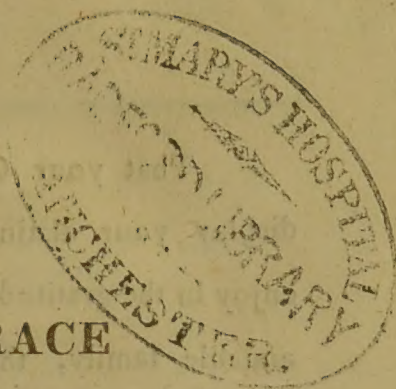
TO
HER GRACE

THE

DUCHESS OF NORTHUMBERLAND.



THE principal object of the following discourses, being to attempt a reformation in the management of infants, in order to prevent, or alleviate their sufferings; I beg, that I may be permitted, to hold up your Grace's illustrious example, in all the duties of a mother, and especially, in that, which nature points out, to be the most tender and important, as peculiarly worthy of imitation.



That your Grace may long live, to display your distinguished virtues, and to enjoy in the gratitude, and veneration, of your amiable family, the just rewards, of such tender assiduities, is the ardent wish of

Your Grace's

Most obedient, and

Most devoted Servant,

JOHN HERDMAN.

Charlotte-Street, Bloomsbury,
13th April, 1807.

CONTENTS.

DISCOURSE I.

	PAGE
INTRODUCTION	1
Division of the subject	29
Of the management of the infant immediately after his birth	ibid
Of his management from the period he is applied to the breast till towards the time he should be weaned ..	80
Of his management during the process of weaning ..	118
Conclusion	125

DISCOURSE II.

	PAGE
Introduction	1
Division of the subject	2
Disease of the stomach and bowels	3
Of the laws of heat in regard to the living body	84
Of the different modes in which heat or temperature produces inflammation	86
Of the condition of the infant in regard to temperature	91
Of the doctrine of inflammation	94
Of the affection of the infant's nose	105
..... of his lungs	123
..... of his eyes	156
..... of his skin	164
Conclusion	169



DISCOURSES

ON THE

MANAGEMENT OF INFANTS,

AND THE

TREATMENT OF THEIR DISEASES.

DISCOURSE I.

OF THE MANAGEMENT OF INFANTS DURING THE
PERIODS OF NURSING AND WEANING.

IT is no less astonishing than true, that more than a fourth part of the human race die in infancy—in their first year. To what can this be owing? Is it a natural evil? Is the cause of infant death interwoven or inherent in the very nature and essence of the infant constitution? Is it appointed, in the nature of things, that so great a proportion of mankind are born to die in infancy? No: The idea is impious, and directly arraigns the

very Author of being. He has formed them to live, and their premature death is none of his doing. It is owing to mistaken notions, and misguided reason; to a miserable and a total oversight of all the institutions and intentions of nature in regard to their treatment; to practices the most absurd and unfounded; in one word, to the most horrid and culpable mismanagement.

In speaking thus strongly I am disposed to make no apology; for I am pleading the cause of those who cannot help themselves. I am pleading the cause of society, of infant humanity, and the happiness and comfort of every parent. But it is to you, mothers, that I would chiefly address myself. This is your peculiar province. It is for you to manage, and direct the management of your infant offspring. It is with you that the reformation in their treatment must begin and be completed. To you, therefore, I will endeavour to unfold this subject; to you I will speak freely and openly. I will neither fear your offence, nor make terms with your prejudices. I will lead you by the

faithful and unerring hand of Nature ; and, if I do not lose sight of her myself, be assured that I will not lead you astray.

THERE is one thing in which you err, and that is your implicit confidence in the judgment and opinions of your midwives and nurses. You allow and desire them to prescribe, not only for your infants, but also for yourselves. You take them out of their own sphere, and you dignify them with the office of the Physician.' They are employed about they know not what, and they deal destruction around them.

" We write to reason: Hence ye doating train
Of Midwives and of Nurses ignorant !
Old beldames grey, in error positive,
And stiff in prejudice, whose fatal care
Oft death attends, or a life worse than death."

On the other hand, if you are willing to give them consequence, they are as willing to take it. They consider the management of you, and your infants, as their own peculiar province ; they are jealous and fearful of the least

interference ; they give a profusion of advice, but they take none ; they insinuate that it is they, and they only, that know any thing of the matter ; they are wise in their own conceit, and their conceit and obstinacy are only equalled by their ignorance.

HEAR their character by a judicious writer. He wonders at the errors in the management of women in child-bed in large towns, and especially in London. " But our wonder will cease, (says he) when we reflect, that not only the general causes, in large populous towns, will operate, but likewise, that the articles of air, diet, dress, &c. are left to the management of nurses in that city, (London) who claim it as a kind of prerogative, and it is next to sacrilege to encroach upon their privileges. Whether this circumstance has been considered in that important light it deserves, or whether the success of a reformation has been despaired of, I will not pretend to determine. The nurses in London are a numerous and powerful body, and an attempt to reform their ancient customs might be looked upon as an

open attack upon them, a violation of their rights, and an actual declaration of war. A young man, just coming into business, might justly think it too daring an attempt to encounter them ; he would, in all probability, be unequal to the task, and his future progress would be stopt, by making such powerful enemies. The man in full and established business could not, perhaps, spare so much time as would be necessary, for it would require a very frequent and constant attendance upon his patients to see that the nurses did their duty ; and, by such an attempt, he might lose much, and gain little, except trouble and opposition." Thus do the nurses follow their career without molestation. The faculty find it an unpromising, unthankful, and unrewarded task, to interfere with them ; for they are big in their station, and above all direction and controul, by the confidence and trust which you repose in them.

But, in this matter, you are greatly deceived. You are deceived under a false idea of experience. You think that, as midwives

and nurses, they must have great and extensive experience, and must therefore be qualified to direct the management, and even to treat your own diseases, as well as the diseases of your infants. Nay, you go so far as to say, "that a woman who has born and reared a family of children is more fitted to direct the management of an infant, and to treat its diseases, than the doctors." But, in all this, there is little experience, and much prejudice. And be assured, that a midwife, a nurse, or an old woman, is as unqualified for the important office which you rashly assign to her, and which she as rashly undertakes, at the end, as at the beginning of her days.

Now, in proof of this opinion, I will lead you into no learned discussion concerning the import or meaning of the word experience; only, let me observe to you, that, with respect to nurses and midwives, this term, in its true and proper sense, is totally misapplied. You prefer the old to the young, or those who are considerably advanced in life, because you think that they have had more experience,

and the idea seems natural enough. But, because they have been long employed in the business, it by no means follows that they are experienced. Nay, let them follow it, the greater part of their lives, and, at the end, they are no one whit wiser than when they began.

This you may think a strange doctrine, but it is no more strange than true. For where does your midwife or your nurse get her education? She gets it from her grandmother, her mother, her aunt, or some such motherly woman, and in her common intercourse with society; from those who were educated in a similar manner, and who are equally ignorant with herself. She imitates their practices, and implicitly follows their example. And, in the treatment of children, as well as in the other departments of the profession, we can trace the footsteps of the physicians and practitioners of former days, who were as bigotted, and as ignorant, in many respects, as the good women among whom they practised. In short, the customs and practices, in the

treatment of infants, have been long handed down from mother to daughter, from one generation to another, even until this very day, with little alteration, and as little real improvement.

In all this there is nothing like experience. Nay, to call it experience is a perfect prostitution of the word. It is a mere routine, a mere imitation of what they have seen done before them; a mere repetition of the same practices; right or wrong, they inquire not; they take them for granted; their customs and practices most religiously do they observe, and as tenaciously do they adhere to them.

In proof of this position, I appeal to your own observation. Do you see your nurse or your midwife treat the last child in any other manner than she did the foregoing, or the first? Does she not wash their lower parts with cold water, and their head with brandy? Does she not clothe them all in the self-same manner, even to the nicety of a pin? Does she

not purge, feed, and cradle the last, as well as the first? In short, does she any one thing, either with regard to yourselves, or your infants, on one occasion, that she does not on every occasion? If she did, she would think that she was doing greatly wrong, and working much mischief.

Now, from all this, you may see, that your female directresses are not guided by experience. It has no share in directing their conduct. They walk in the beaten tract; they turn neither to the right hand, nor to the left; they repeat the self-same practices. If these practices be right, good and well; but, if they be wrong, the more pity. But, in either case, whether right or wrong, it follows that they are as fitted for the important trust, which they undertake, at the end, as at the beginning of their career; for they change nor vary not in all they do.

Thus, I would have you to understand, that experience, properly so termed, does not consist in habit, or in a constant and uniform re-

petition of the same practices. It consists in retaining, changing, or varying our practices, according as experience, or repeated trials, shall point them out to be good or bad, or in leaving off those practices that experience shows to be bad, and substituting others in their place, till, by the same means, we ascertain or discover the very best. This is the road, and the only true road, in which useful knowledge and true experience is to be found. But, to walk in it with success implies a mind free from prejudice, open to conviction, acute and discerning, greedy of observation, and inured to habits of thinking or reflection. How far your midwives and nurses have minds thus endowed, or how far they profit by experience, I shall now leave you yourselves to judge.

But I must now tell you, that the fit and proper management of the infant state, is not to be found in experience alone. It is to be found in more sure and infallible grounds, than either experience or reason ; it is to be found in the fixed and established laws of nature ; in laws which nature has implanted in the breast of

every living being, human or brute, and which are no less stable than the very foundations of the earth itself : In one word, the fit and proper management of the infant state, is to be found in the sure and unerring principle of *Instinct*.

THE inferior animals, incapable of combining ideas, and drawing conclusions ; not favoured with the boasted reasoning power of man, but wholly guided by the dictates of pure instinct, seldom, if ever, deviate from the laws and institutions of Nature. They vary not in their modes of life. They never employ, except from the most urgent necessity, any species of food but what is consonant to their nature : And, in their general habits of life, they never pursue courses injurious to that constitution which Nature has bestowed upon them. They are, therefore, strangers to many of those diseases and calamities existing among mankind, which evidently owe their origin to gross deviations from the laws and institutions of Nature.

Thus, you may learn, that, in the general œconomy of life, reason is a frail and erring guide, and that instinct is a much more sure and certain director. Observe also, that those animals more immediately under the direction of man, as horses, cows, and other tamed animals, are much more subject to disease and death than wild animals, or the same species in the wild state. When left to the direction of their natural instincts, they enjoy uninterrupted health, but, subjugated to the caprice of man, they become partakers of his calamities.

MAN, again, in the most uncultivated state, possesses, in a considerable degree, several of those advantages which brute animals have over him. In proportion as the human race are less civilized, they are more guided by instinct, and are therefore proportionally strangers to the refined pleasures, as well as the miseries, to which their more cultivated brethren are subject. It is, indeed, the province of reason to correct and prevent the impetuous action of our instincts and passions ; and, as far

as this is done, man arrives, with respect to temporal things, at the utmost perfection of which his nature is capable. But, unhappily, from the improper use of those mental faculties which so strikingly distinguish us from the inferior animals, we frequently observe the most capricious deviations from the laws and institutions of Nature, to which the uninformed savage, and the irrational animal, would most rigidly adhere. It therefore follows, that, in a considerable part of the ordinary conduct of life, instinct is a guide upon whose direction we can with much more safety rely than on that of reason ; and that much advantage may be derived from an accurate knowledge of our own instincts, as well as those of the inferior animals.

WERE it possible to ascertain with certainty what are indeed the natural instincts of man, we should, so far as these go, be possessed of an unerring guide. But, among civilized nations, education has, in many instances, smothered, if not almost rooted out, many of our natural instincts. And, on the other hand, many customs,

founded on mere caprice, on the misapplication of our reasoning powers, have, by habit, acquired so great a degree of force, that we are liable, not unfrequently, to suppose them original instincts of our nature.

AGAIN, if we search for the natural instincts of man among the savage nations, we shall also find ourselves involved in difficulties, and in danger of deception ; for, though more immediately under the direction of this principle than civilized nations, yet we are unacquainted with any savage tribe among whom some mode of education does not exist, and by which the natural feelings and instincts of man are more or less perverted. And, in proportion to the prevalence of ignorance, and its concomitant, superstition, it is probable that, in some instances at least, their deviations from the laws and institutions of Nature will be more absurd and preposterous.

WHERE, then, am I to find precepts to guide you in the right management of your infants? They are not to be found in civilized society ;

for there perverted reason reigns triumphant, and absurd and destructive practices universally prevail. Neither are they to be found among the savage nations; for they also, in some measure, forsake the paths of nature, and follow their own inventions. Where, then, are they to be found? They are only to be found pure and undefiled among the inferior animals, where the dictates of Nature and of Instinct reign free and uncontrouled, and where their every action is strictly consonant to the nature and condition of their infant offspring. And mark the effect: their offspring are free from pain and sickness, from disease and premature death.

SUCH, also, would be the case with your infants, were they treated according to the pure dictates and intentions of Nature. They would be almost free from every disease but those which arise from contagion, as small-pox, measles, and hooping-cough. Instead of disease, they would have health; instead of pain, they would have every agreeable sensation; instead of leanness and emaciation, they would have plumpness; instead of distortion and

a stunted growth, they would have every beauty of shape, and a growth the most perfect : In one word, instead of death, they would have life. Nature's œconomy would be perfect within them. Let me, therefore, entreat you, nay, let me conjure you, to hearken to the voice of Nature. Leave your old practices and prejudices behind, and forget them, as if you had never learned them; and then hear the institutions, intentions, and dictates of Nature, in the treatment of your infants; and hear them illustrated, strengthened, and confirmed, by the example of those of your own species, who have not wandered so far from the paths of Nature; and by the conduct of the inferior animals, who know nothing but obedience to her institutions, her dictates, and her laws.

IN this manner will I endeavour to address your understanding, root out your old prejudices, and point out the way in which you should walk. I will not give you rule without reason, nor practice without principle. I will endeavour to lay before you right reason, and

the nature of things. But, while I talk to you of the conduct of the inferior animals, do not feel yourselves degraded. I am fearful that such feelings should lay hold of you, and therefore I will forewarn you, and by an authority much greater than my own.

“MAN has been usually considered,” says the late learned and ingenious Dr Gregory, “as a Being that had no analogy to the rest of the animal creation. The comparative anatomy of brute Animals hath indeed been cultivated with some attention, and hath been the source of the most useful discoveries in the anatomy of the Human Body : But the comparative Animal Oeconomy of Mankind and other Animals, and comparative Views of their states and manner of life, have been little regarded. The pride of Man is alarmed, in this case, with too close a comparison ; and the dignity of philosophy will not easily stoop to receive a lesson from the instinct of brutes. But this conduct is very weak and foolish. Nature is a whole, made up of parts, which, though distinct, are yet intimately connected

with one another. This connection is so close, that one species often runs into another so imperceptibly, that it is difficult to say where the one begins, and the other ends. This is particularly the case with the lowest of one species and the highest of that immediately below it. On this account, no one link of the great chain can be perfectly understood, without the knowledge, at least, of the links that are nearest to it." And, in another passage, he says, "We apprehend that, where the voice of Nature and Instinct is clear and explicit, it will be found the surest guide ; and, where it is silent or doubtful, we imagine it would be proper to attend to the analogy of Nature among other animals ; not to be an absolute rule for our conduct, but as a means of furnishing light to direct it ; and we admit, that, in order to determine what truly is most proper for us, the ultimate appeal must be made to cool and impartial experience."

THESE quotations are so clear and explicit, that they require no comment. You see that "Man has been usually considered as a being

that had no analogy to the rest of the animal creation." But this is a great mistake ; for " Nature is a whole, made up of parts, which, though distinct, are yet intimately connected with one another." You are intimately connected with, and there is much similarity between you and some of the inferior animals ; for example, those inferior animals who suckle their young. You stand above them only in the endowment of reason. But it is this very reason, or rather the abuse of it, that leads you astray. False reasoning is the source of all your errors. Your own instincts have no influence nor dominion over you. Therefore, " stoop to receive a lesson from the instinct of brutes." To do otherwise, implies a " conduct very weak and foolish." For, " where the voice of Nature and Instinct is clear and explicit," in yourselves and your infants, " it will be found the surest guide ; and, where it is silent or doubtful, it is " proper to attend to the analogy of Nature among other animals, not" as " an absolute rule for" your " conduct, but as a means of furnishing light to direct it; and, in order to determine what

truly is most proper for" you, " the ultimate appeal must be made to cool and impartial experience ;" an experience, however, very different from the common experience of the world.

THESE principles shall guide me in treating the subject of this discourse. I will endeavour to point out to you the institutions and intentions of Nature in the management of the infant state. I will try to give them force and illustration by examples drawn from those of your own species, who have not wandered so far from the paths of Nature, and from some of the inferior animals. I will endeavour to rid you of errors the most dangerous and destructive, and bring you to practices the most safe and salutary. I will speak to you by Nature's voice, and do you hear without prejudice or partiality. Let the subject interest you according to its importance, for, of all others, it is the most important, it concerns life and death.

THE extraordinary mortality of your infants

must rouse the feelings of every one who has the least spark of humanity. It is a great and a deplorable evil, and many attempts have been made to assign the cause why Nature is so prolific in the production, and, apparently, so little attentive to the preservation of the noblest species in the animal kingdom, the human race. Some have supposed the delicacy and irritability of the infant constitution; others the sudden and total change of every circumstance in the infant body which takes place at birth; nay, more preposterous than all, the cause of infant death has even been ascribed to the very nature of the mother's milk. Now, what is the meaning of all this? The meaning is perfectly plain. It implies neither more nor less than that the seeds of death are sown, as it were, in the very nature or essence of the infant constitution, and that the great mortality which prevails among them is a necessary consequence of the very laws and institutions of Nature.

But this doctrine is founded on ignorance, or on narrow and contracted views of Nature's

works. The great mortality of your infants is neither owing to the delicacy of the infant constitution, nor to the changes which take place in the infant body at birth, nor to the nature of the mother's milk, nor to any one of the institutions of Nature; and, for this very good reason, that the infants of the savage tribes are by no means so subject to the many diseases, and the consequent mortality, which prevail among the infants of civilized nations. Besides, the young of the inferior animals, especially of those who are not under the immediate care of man, know neither disease nor death. With them the laws and operations of Nature reign free and undisturbed; but, with the human infant, and more especially with the infants of civilized nations, this is by no means the case. Your infants are subject to fatal diseases in exact proportion to the progress of your luxuries, and supposed refinements; in exact proportion to the degree in which you wander from the paths and institutions of Nature. To lay the cause of infant disease and death to the door of Nature, or to suppose it a necessary consequence,

or unavoidable in the nature and constitution of things, involves a perfect and a downright absurdity. This is the true state of the matter, and this is the true source of the great mortality of your infants ; in their management you have forsaken the ways and dictates of Nature, and adopted those of Art.

TRUE, indeed, the infant frame is delicate ; it is readily injured by the action of every hurtful power. Generally speaking, the same cause which would produce disease in the infant would have no effect on the adult ; that is, the constitution of the former is more easily injured than the constitution of the latter. But what does all this imply ? It only implies that you should be the more careful to preserve your infants from the influence of those causes which produce disease. It does not imply that they have the seeds of disease abiding in their constitution, or that, in them, more than in the adult, disease takes place without a cause. Before disease takes place in either, they suffer the influence or operation of a hurtful cause ; and the only difference is,

that a more simple cause may produce disease in the infant than in the adult.

BUT, notwithstanding of all this, in a general sense, infants enjoy the powers of life and health in a greater degree than adults. If the infant body be more easily injured, and more easily thrown into disease, than the adult body, it more readily recovers, and regains the healthful state. Besides, the infant is greatly free from all those tormenting passions of the mind which form a source of disease so powerful to the adult. The advantages, in point of recovery from disease, which infancy enjoys above the adult state, are extremely obvious. Every medical practitioner has observed them. He has observed children recover from disease when he little expected it; recover under circumstances peculiarly unfavourable; under circumstances which might have proved highly dangerous, nay destructive, to the adult. In one word, daily observation verifies that the state of infancy is much more favourable to recovery from disease than the state of manhood. Were the powers of Nature, therefore,

allowed to operate, and properly assisted; were the institutions and intentions of Nature properly observed in the management of the infant state, instead of the great mortality which prevails among them, a much smaller number of the human race would perish in infancy than at any other period of life.

THIS opinion may not seem clear to you at first sight. You may think it impossible that the infant constitution, tender and delicate, should recover more readily from disease than the constitution of the adult. But a moment's reflection will put this matter to rights. The adult constitution is not as it came from the hand of Nature, perfect and entire; for no human being, especially in civilized society, lives according to the rules of Nature. The adult constitution, therefore, generally speaking, has suffered the action of many hurtful powers; irregularities of living of various kinds; excess in eating and drinking, or starvation; various vicissitudes of heat and cold; too much labour, or too much rest; various anxieties, and tormenting and depress-

ing passions of the mind ; various diseases, and ill treatment under these diseases : In short, the adult constitution has suffered the action of many powers which derange it, and diminish its energies ; and thus, when it falls into the state of actual disease, its recovery is often both slow and imperfect.

BUT the infant constitution is, as it came from the hand of Nature, perfect and entire. It has not suffered the reiterated and continued action of any hurtful power to derange it, or to diminish its energies. The powers which hurt the infant constitution, and which throw it into the state of disease, are immediately operating ; they are operating at the very time ; and, no sooner are they removed, and the powers of Nature in the infant body allowed to operate, and properly assisted, than it immediately, or very soon regains the healthful state.

THUS have I endeavoured to explain to you why infant recovery from disease is so ready and rapid, and why adult recovery is so slow

and tardy. You will, at once, perceive that the same reasoning is applicable to youth and old age. In youth, the energies of the body are vigorous and lively, and it soon mounts up to health. In old age, the energies of the body are worn out and languid, and its recovery from disease is slow and difficult. In the infant body, the energies and operations of Nature are entire and perfect ; are lively and unexhausted. Thus, were it not for immediate and great mismanagement, a much smaller number of the human race would perish in infancy, than at any other period of life.

THE great source, then, of all the ills of infant humanity, is mismanagement, or the want of a due attention to the laws and institutions of Nature, in their treatment. The rules and institutions of Nature have been superseded by those of art. Ignorance, false reasoning, and fancied improvements, have introduced a thousand absurdities in the dress of infants, in their food, in the temperature, or the degrees of heat or cold to which they are

exposed, as well as in every other part of their management. But, of all these absurdities, the use of improper nourishment is by far the most reprehensible, Nature having so plainly pointed out their proper food.

Now, I am aware that you will think all this ridiculous and absurd, and that there is nothing wrong in the management of your infants. But why do you think so? Have you considered the subject, or inquired into it? Or do you not rather take the whole for granted, and suppose that the treatment of your infants is right because it is generally employed, and because you are accustomed to it? You see their tortures, and you hear their cries; you see their diseases, and you see their death; yet you know not the causes thereof. You have all the feelings of a mother, yet, often and often, do these very feelings prompt you to measures which produce the very effects, you would most anxiously remove.

LET me, therefore, endeavour to point out to you the true and proper management of

your infants. Let me speak of their clothing, their food, their warmth, and every other the most minute point of their treatment. And, to comprehend the whole, let me consider the management of the infant, from the period of his birth till the period in which he is about to suck ; from thence, till about the time that he should be weaned ; and, lastly, let me point out his management during the process of weaning.

FIRST, then, I am to consider the management of the infant, from the period of his birth till the period in which he is about to suck.

THE infant born, the first thing that engages the attention of the good woman in attendance, the midwife, or nurse, is the cleansing of his skin. This is reckoned a most necessary piece of duty, and much does he suffer by the operation.

He suffers from no less than five causes. First, From exposure to cold. Secondly, From

being tossed and tumbled about upon the nurse's knee. Thirdly, From friction by her rough and rude hands. Fourthly, From the nature of the cleansing substance. And, Fifthly, he suffers, and he suffers most severely, from the excoriations and inflammations which follow this officious cleansing of his skin.

BUT, why should all these things be done? Why should the infant's skin be washed or cleansed with spirits, or wine, or ale, or butter, or pomatum, or soap and water, or plain water, or any other substance whatever? All these, and more, have been, at one time or another, employed; yet, why should any one of them be employed? or, why should the infant's tender and delicate skin be subjected to such treatment? If there be any good reason why it should be done, let it be done; but, if there be not, let it be left undone.

THIS coating or covering which the infant obtains in the womb is surely not put there for nothing. Be assured that Nature has some wise and necessary design or purpose in the

matter; for it adheres, and it adheres most firmly, to his skin; and, if left to itself, in a certain period after birth, it dries, and forms a crust, and gradually scales off in the œconomy of Nature, and leaves the skin it covered, heal and healthful, and capable to bear every common, or necessary freedom.

THE infant, previous to birth, inhabits a medium very different from the medium of this world. For one thing, the degree of heat is widely different. The internal heat of the mother is much higher than the temperature of our atmosphere, and even much higher than the common heat of the apartment in which the infant is born. Now, it is, perhaps, not too much to suppose, that the covering which the infant's skin obtains in the womb is intended to prevent the escape of heat from his body, or, in common language, to keep him warm; to make the transition gradual and imperceptible, as it were, from a higher to a lower degree of heat, that he may not suffer from such a sudden and material change of temperature.

But, the medium which the infant inhabits previous to birth, is not only different from the medium which we inhabit, in regard to temperature, but also in regard to another material circumstance; for, before his birth, he floats loosely in a fluid, where his skin is preserved from every possible injury. It would seem, therefore, that the covering which he obtains in the womb, and which is born with him, is intended to defend his young, tender, and delicate skin, from the contact of the air, from friction, and from every common injury; to defend it for a certain time till it acquires strength and firmness to bear the action and contact of external things, and thus to prevent disease, to prevent fretting, excoriation, and inflammation.

THE parts of the infant's body most subject to excoriation and inflammation are the parts which come in contact with each other, where skin is applied to skin, as the neck, arm-pits, and groins. Now, on these parts, the natural coating, the covering which the infant obtains in the womb is thicker than on almost

any part else. Nature, conscious as it were of excoriation and inflammation in the neck, arm-pits, and groins, has provided against these ills, yet are her intentions frustrated by ignorant and officious care.

BUT, suppose, if you please, that this covering of the infant's skin is intended for no purpose, suppose that it neither serves the purpose of warmth, nor defence, nor prevents fretting nor inflammation, yet why should it be removed? It is neither poisonous, pestilential, nor deadly; it will neither contaminate bed-clothes nor body-clothes, nor will it cause disease; it is as innocent as the infant it covers. As I have already told you, it dries, and forms a crust, and gradually scales off in the œconomy of Nature, and leaves the infant's skin heal and healthful, and capable to bear every common or necessary freedom.

DISEASE, however, is a necessary consequence of its removal. It adheres, and it adheres most firmly, to the proper skin. It is as it were a first skin, to be thrown, in a certain period

after birth, when the proper skin becomes fitted to perform its office, or to bear the action and contact of external things. It cannot be touched without injury. Nay, it adheres so firmly to the head, the neck, the arm-pits, and groins, that it cannot be removed without removing the skin itself. But the skin is injured by its removal in any degree ; it is injured by the rubbing of the hand, and by the substance employed in its removal. These causes bring excoriations and inflammation, and severe pain. Then comes the need of your drying and absorbing powders, your white lead, your tutty, and your burnt rags. By this officious cleansing of his skin, your midwives and nurses bring much suffering to the infant, and much trouble to themselves.

WHAT, then, have they to do? They have nothing to do but to take the infant's skin as Nature gives it them ; nothing to do but to dry it, in the most kind and gentle manner, with the receiver, or a piece of old soft spongy cloth, warmed at the fire, and then proceed to clothe him.

Now, how should they proceed to clothe him? Not, by any means, in the ordinary manner. The clothing of your infants should be as simple as it has been complex. Be it fitted to keep the infant warm enough, and its purpose is answered. Its purpose is a due degree of warmth, and not finery. Yet the latter engrosses all your attention. If his dress be fine and fashionable enough, you think that all is right. But it is seriously wrong; for the infant suffers great vexation and torment till he be dressed, and adorned according to the fashion of the day.

I would not inquire impertinently into this subject, but you know the truth of it. You know your cost and trouble in the preparation and order of your infant's dress. But do you not also know his screams and cries in the operation of dressing?

FROM beginning to end it is a most serious operation; it is a nice and a troublesome operation. It is troublesome to the nurse; it is troublesome and tormenting to the infant.

Yet, after all, it might be worse. It was worse in former days, when the operation of dressing was an operation of bandaging ; when the head was braced with fillets, and tied down to the breast as if it had been in danger of falling over the back ; when the infant was swaddled, from head to foot, as if he would have fallen asunder ; the arms tied down by the sides, and the legs bound together ; when, by bandages, the bowels were compressed, and the lungs, as well as every other vital organ, had no room to play ; when the infant was swathed from head to foot, more in the form of an Egyptian mummy, than a living and a feeling being.

THESE things must shock you ; they must rouse your feelings and your curiosity. You must be curious to know why the infant was subjected to such cruel and such barbarous treatment. It proceeded from the no less barbarous theories and speculations of physicians *. They speculated about the infant's

* It is not improbable, however, but that this treatment of the infant had its origin in the language of the sacred

imperfect structure at birth, about the imperfect structure of his bones, the shapeless form of his head, and the injuries he might sustain in the birth ; about injuries and distortions from hurtful motions and unnatural positions. They thought the infant's body unable to support itself, and that even its own motions might destroy it *.

BUT, while they reasoned thus, they reasoned foolishly. They reasoned against Na-

writings, as the phrases, swaddling bands, and swaddling clothes, occur both in the Old and New Testament. But, be this as it may, the speculations of physicians supported the practice.

* Then in came the midwives and nurses for their share of the concern. The task was theirs to model the head, and to straighten the limbs ; to improve upon nature, as it were ; and to support their improvements by the application of fillets, rollers, and swaddling bands. They vied with each other who should work the work most cunningly ; for, strange to tell, dexterity in working this work of cruelty was reckoned one of their most necessary and important qualifications.

ture and her all-wise provisions. How unwise to think that Nature would leave the due order of the infant's shapes, or the preservation of his body, to the contingencies of swaddling bands and swaddling clothes ; to the chance of their being put on or not, according to whim or fancy ; for there is not a single principle in Nature to direct or point out that the infant body should be bandaged or bound up with rollers or swaddling bands, or any one thing that can in the least degree confine its motions.

'Tis true the structure of the infant body is imperfect. For one thing, the bones are incomplete. They are soft, spongy, and flexible, and may be bent or moulded in almost any form or shape. But in this we behold the very wisdom of Nature ; for the bones of the infant's head are formed to yield in the pressure of labour, and to resume their wonted position when that pressure is removed ; and, though the bones, in general, be soft, spongy, and flexible ; though the joints be soft, lax, and delicate ; yet are they perfectly fitted to perform their motions. The

power of motion in the infant body is wisely apportioned to the strength or firmness of its structure. If the bones be weak, soft, and easily bent, the power of the muscles which moves them is also weak, and cannot injure them. The wisdom of Nature is conspicuous throughout all her works, but no where more so than in the structure and œconomy of the infant body. He is as far beyond the need of rollers, bandages, or swaddling clothes, to mould, support, or defend his body, as the adult. They would even injure the adult, but more readily the infant. Most readily would they distort his soft and pliant bones; disfigure and prevent the growth of his soft parts; impede and disturb every function of his body, and prove destructive even to life itself.

BUT the absurdity and injurious effects of rollers, bandages, or swaddling clothes, are not only apparent from his own structure and œconomy, but also from the structure and œconomy of the inferior animals.

“ An infant,” says Buffon, “ is *more help-*

less than the young of any other animal : Its uncertain life seems every moment to vibrate on the borders of death. It can neither move nor support its body. It has hardly force enough to exist, and to announce by groans the pain which it suffers ; as if Nature intended to apprise the little innocent that it is born to *miser*y, and that it is to be ranked among human creatures only to partake of their infirmities, and of their afflictions."

THIS, however, is a popular, and not a philosophical view of the subject : for the human infant is by no means more helpless than the young of the inferior animals ; and his miseries are not the miseries of Nature, but of luxury, refinement, dissipation, and artificial modes of management. The miseries of the savage infant are small, when compared to the miseries of the infant of refined society.

BUT, in regard to the opinion, that the " infant is more helpless than the young of any other animal," let me quote the observations of a philosopher of our own country. " Though

infants," says he, " remain longer in a state of imbecillity than the young of other animals, they are by no means more *helpless*. The instant after birth, they are capable of sucking whatever is presented to their mouths. When in the same condition, the young of the opossum, of hares, rabbits, rats, mice, &c. can do no more. They can neither move nor support their bodies. Besides, many quadrupeds are destitute of the sense of seeing for several days after birth. But the faculty of vision is enjoyed by infants the moment after they come into the world. This faculty, in a few hours, becomes a great source of pleasure and amusement to them ; but it is denied, for some days, to many other species of animals. The young of most birds are equally weak and helpless as human infants. The former have no other powers but those of respiration, opening their mouths to receive food from the parent, and ejecting the excrement, after the food has been properly digested."

Thus, you perceive, that, though infants remain longer in a state of infancy or imbecil-

lity than the young of the inferior animals, yet they are neither more imbecile nor more helpless. The young of the opossum, of hares, rabbits, rats, mice, and many other animals, can neither move nor support their bodies. Their structure is as incomplete as the structure of the infant ; their bones are as soft, spongy, and flexible ; their joints are as soft, lax, and delicate ; yet is there no external provision, either in Nature or art, to mould or form their shapes, or to support or defend their limbs. They are left free as the bird in air ; they grow up to maturity and vigour ; and mark the symmetry of all their members, and all their parts : they have neither distortion of bones, nor unseemliness of any kind.

BUT, in order to place this subject in a still stronger and more familiar point of view, let me direct your notice to the customs and practices of some of your own species.

“ THE Peruvians leave the arms of their infants perfectly loose, in a kind of swathing bag. When a little older, they are put, up

to the middle, in a hole dug out of the earth, and lined with linen or cotton. By this contrivance, their arms and head are perfectly free, and they can bend their bodies, and move their arms and head, without the smallest danger of falling, or of receiving any injury. To entice them to walk, whenever they are able to step, the breast is presented to them at a little distance. The children of negroes, when very young, cling round, with their knees and legs, one of their mother's haunches, and grasp the breast with their hands. In this position they adhere so firmly, that they support themselves without any assistance, and continue to suck, without danger of falling, though the mother moves forward, or works at her usual labour. These children, at the end of the second month, begin to creep on their hands and knees; and, in this situation, they acquire, by habit, the faculty of running with surprising quickness. The negroes, the savages of Canada, of Virginia, of Brasil, and the natives of almost the whole of South America, instead of using swaddling bands, lay their infants naked into hammocks, or hang-

ing beds of cotton, or into cradles lined with fur."

SIMILAR to this is the treatment of the African infant, or, at least, of the infants of the Kaffers. Speaking of these people, the writer of the travels into the interior of Southern Africa observes, that "their children, soon after birth, are suffered to crawl about perfectly naked; and, at six or seven months, they are able to run. A cripple or deformed person is never seen."

IN Egypt, again, "the haram is the cradle or school of infancy. The new born feeble being is not there swaddled and filleted up in a swathe, the source of a thousand diseases. Laid naked on a mat, exposed in a vast chamber to the pure air, he breathes freely, and, with his delicate limbs, sprawls at pleasure. The new element in which he is to live is not entered with pain and tears. Daily bathed beneath his mother's eye, he grows apace. Free to act, he tries his coming powers; rolls, crawls, rises, and, should he fall, cannot much

hurt himself on the carpet or mat that covers the floor."

Now, what further proof is necessary to show that rollers, bandages, or swaddling clothes, are unnecessary? All Nature calls aloud against them. The structure and œconomy of the infant himself, the structure and œconomy of the inferior animals, and the customs and practices of some of your own species, bring a body of evidence the most incontestible, that they are totally and completely unnecessary.

BUT I should not have been so anxious to show you that they are unnecessary, had it not been my intention to show you also that they are injurious; that they can distort the infant's bones, and disfigure and prevent the growth of his soft parts; and that, on the contrary, freedom of motion in all his organs, in all his members, in his whole body, is essential to his health, his growth, his vigour; to the seemliness of his figure, form, and shapes; to the due

performance of all his functions, and to his pleasure, ease, and comfort.

Now, in order to illustrate these points, I must again direct your attention to the customs and practices of some of your own species.

For example, the natives of Aracan are great admirers of large flat foreheads. To produce this effect, they bind a plate of lead on the foreheads of their infants immediately after their birth. In like manner, by early compression, the Chinese and Japanese render the feet of their females so small, that it is with difficulty they support their bodies. In these nations, does a woman wish to be thought fashionable and handsome, her feet must be so small, that they can easily enter the shoe of a child of six years of age.

BUT, on the other hand, in the southern provinces of China, the girls, instructed by their mothers, extend their eye-lids continually, with the view of making their eyes

oblong and small. These properties, in their estimation, when joined to a flat nose, and large open pendulous ears, constitute the perfection of beauty. All the eastern nations discover a taste for long ears. They draw the lobe of the ear to stretch it to a great length. Others, as the natives of Laos, widen the holes of their ears, insomuch that it is said a man's hand may be thrust through them. Hence the ears of these people often descend to the tops of their shoulders.

SUCH are the ideas of beauty of these different people, and such are the means by which they accomplish it. In the first case, they accomplish it by permanent compression ; they squeeze and flatten the young, soft, and flexible bone ; they stop the circulation of the fluids ; they interrupt the progress of nourishment in the vessels ; and thus they distort and prevent the growth of the bones, as well as the growth of the fleshy and soft parts. But, in the second case, they pursue a course the very opposite. They excite the vessels to greater action ; they accelerate the circulation

of the fluids, and promote the flow of nourishment to the parts. Thus it is that they are enlarged ; and thus it is, that, by freedom of motion, and the free and easy play of all his organs, and all his vessels, that the growth of the whole infant body is accelerated and promoted.

BUT, while his growth is promoted, his vigour is increased. You have already seen that the negro infants, in approaching the nipple, cling round one of the mother's haunches with their knees and legs, and adhere so fast, that they support themselves without the assistance of the mother ; that they lay hold of the breast with their hands, and continue to suck, without inconvenience, or danger of falling, even though the mother moves about, or works at her ordinary labour ; that these infants begin to creep on their hands and knees at the end of the second month ; and that, in this situation, they acquire the faculty of running with surprising quickness.

THIS is a state of infancy, a state of vigour

and forwardness, that you are not accustomed to behold. It is a very rare thing to see any of your infants walk before the twelfth month; and it is only a very little before they walk that they begin to creep. But the infants of negro nations creep on their hands and knees at the end of the second month. The progress and increase of their growth and vigour is uninterrupted. They are left free and at liberty in all their motions; for the negroes lay their infants naked into cradles lined with fur.

BUT this mode of the infant's management is not only conducive to the progress and increase of his growth and vigour, but also to the seemliness of his figure, form, and shapes. Among your children, the stunted growth, the weakly constitution, the hunch-back, the prominent breast, the bandy-leg; in short, various and great deformities are frequently seen; while these ills are so rare among the savage tribes, that it has been vulgarly believed they put all their ill-grown, weakly, and deformed children to death*.

* These ills, however, are not to be altogether ascribed

Thus, the very savage and negro nations afford you a most useful and instructive lesson; nations far behind yours in civilization and the polished arts of life; nay, I had almost said, in wisdom and humanity. Yet, in this respect, in the general management of their infants, they show marks of wisdom and humanity far superior to you. Their infants are left free and easy in their motions; yours are over-dressed, and, by their dress, their motions are confined. But than this nothing more unwise and inhumane; nothing more cruel.

IN this respect, therefore, let these nations be your example. Imitate them in their infant freedom of motion. You speak loud in the praises of exercise in a more advanced period of life. You are aware, and justly aware.

to the dress of your infants, or to the confinement of their motions. There are other causes which must be taken into the account. But, in this Discourse, I only speak of disease, or the causes of disease, in general terms, as my next is entirely appropriated to the consideration of the Cause, Symptoms, Nature, and Cure of Infant diseases.

that exercise is necessary to the health, growth, and vigour of the body, when the youth is able to take his bouts of play, and to rove at random with his companions and play-fellows. Why, then, are you not also aware, that exercise, or freedom of motion, is necessary to the health, growth, and vigour of the infant? The free motion of his hands and arms, and the stretching and kicking of his legs and feet, is the exercise which Nature has assigned to the infant in the more early periods of his life. In a word, freedom of motion in all his organs, in all his members, in his whole body, is as necessary to the welfare of the infant as the adult or youth, and is essential to his health, his growth, his vigour; to the scendliness of his figure, form, and shapes; to the due performance of all his functions; and to his pleasure, ease, and comfort.

ON these principles, therefore, let the newborn infant be clothed in the following plain, simple, and easy manner. Let his head be covered with two caps, the first of flannel, and the second of cotton; and let the first be

slightly stitched within the second, forming a lining to it as it were. Thus they may both be put on at once, and the uppermost may be tied loosely below the infant's chin. Then let his whole body, as well as his arms and legs, be covered with the finest cotton cloth, by way of shirt, made loose and easy, and to tie before ; and then let him be wrapped in a fine, soft, and warm flannel wrapper *, and

* THIS mode of clothing the infant. or, at least, the use of the wrapper, is not new. You will see, by the following passage, that it was in use among the ancients :

“ OUR translation has, I apprehend, somewhat unhappily used the term swaddling bands, which implies a number of small pieces narrow rolls, strips, bands ; but the true import of the word, I conceive, should be that of a large cloth or wrapper, such a one as the female figure in our Plate holds up, extended ready to receive the child, and which is of considerable size.

“ TO this idea agree the accounts given us of this part of attention to children among the ancients : the child being washed, it was wrapped in a cloth woven for this purpose by the mother, in the time of her virginity, as may be conjectured by that which Creüsa made for Ion. This, I conceive, was lined throughout for greater warmth. I

laid to rest ; laid into your own bosom, or into the bosom of a nurse *.

You will at once perceive that this dress implies simplicity itself. It implies every freedom of motion to the infant, in his legs and arms, in every muscle of his body, in the rising and falling of his breast in breathing; and it removes all pressure from his belly, to disturb or impede the functions of his stomach

suppose, too, the lining was soft and comfortable, while the outside was richly ornamented. On this cloth, that is, the outside of it, the Erechthidæ had worked the representations of Medusa's head, and the snakes of her hair, besides two dragons drawn in gold, with other ornaments. This description evidently implies that considerable labour and care had been bestowed on this article, so that possibly a handsome cloth of this kind was only procurable by those in easy circumstances. However that might be, the inference is clear, that the cloth was large, that it was not properly bands, but of some amplitude, as otherwise it could not have contained all these decorations, nor would it, we may suppose, have been esteemed worthy of receiving them."—*Fragments to Calmet's Dictionary of the Bible.*

* I SHALL afterwards have occasion to point out when this dress should give place to another.

and bowels; it prevents many painful and disagreeable sensations; it leaves freedom of action in all his organs, and all his vessels, and perfect freedom of circulation in his fluids; and, for these reasons, it promotes his health, growth, and vigour, the elegance and due proportion of all his parts; and prevents distortion in his bones, and disfiguration and unseemliness of many kinds,

It implies neither roller nor belly-band, nor the use of pins; for pins are dangerous and hurtful; and rolling the infant's belly is quite unnecessary to the proper management of the navel-string, and it is as unnecessary to prevent the navel-rupture of his bowels *. The infant is as safe from this rupture as the adult, provided the operation of the causes which produce it be prevented or removed; provided he neither strains nor cries, nor is tossed and tumbled about. These are the causes

* Instead of preventing rupture, it rather tends to produce it; for the application of pressure round the infant's body at the navel forces his bowels downwards, and is apt to produce rupture at the lower part of his belly.

which produce it ; and, if they do not operate, it is plain that it will not, nay cannot take place. And their operation is easily prevented ; it depends entirely on the proper management of the infant. If he be properly managed, he will be neither tossed nor tumbled about ; he will neither strain nor cry ; he will sleep and suck, and suck and sleep ; he will be quiet and torpid, as it were, for the first six weeks, or, at least, till there be no danger of navel-rupture, nor of any accident of the kind.

LET the infant, therefore, be properly managed, and the rupture of his navel will not take place ; let the causes which produce it be removed, or not allowed to operate, and there will be no need of rollers or bandages to prevent it. For the sake of cleanliness and dryness, wind the navel-string in a piece of old soft rag ; lay it upon the infant's belly *, and,

* Or, if you will have it supported, lay over it a small piece of old soft rag, folded once or twice, and over this again a roller of the same material put once round the infant's body in the slightest manner.

in a short time, it will shrivel and die, and fall off, as it does among the inferior animals, where there is no management of the navel-string, nor no rolling nor bandaging of any kind, and yet rupture is unknown among them.

Now, what objections can you have to this mode of clothing the new-born infant? Decide not hastily on this subject; for it is a subject of no inconsiderable importance. Think on it, and think on it seriously. Let it arrest your attention, and let it not pass through your minds as the tale of the day. View it in all its connections, bearings, and effects. Let prejudice, established custom, and fashion, have no influence over you. Think not that the present mode of clothing the new-born infant is right merely because it is generally employed, and the only mode you have been accustomed to see; but consider it in itself; consider its effects; consider whether or not it might be improved; compare it with another mode, and see which of the two ought to have the preference. Consider also the objects you ought to have in view in contriving the dress

of the new-born infant ; that dispatch in clothing him, a certain degree of warmth, cleanliness, and perfect freedom and ease in all his motions, are the only essential objects ; and that fashion and finery are but a name, and contrary to all right reason, and the state and condition of the infant body at birth.

THE dress and the treatment I have proposed are as simple as may be, yet fully sufficient to answer every necessary and reasonable purpose. But attend for a moment to the state and condition of the new-born infant, and to the effects of the common modes of his management ; and I trust you will not fail to see their advantages in the clearest and strongest point of view.

I HAVE already told you, that the infant, previous to birth, inhabits a medium very different from the medium of this world ; that the temperature is different ; and that he floats loosely in a fluid, by which he is defended from every external injury. But this is not all ; for, previous to birth, also, he lives through

his connection with the mother; by the influence and operation of her functions. After birth, however, he lives by the operation of his own functions; and therefore, at birth, he undergoes many very material and important changes. For one thing, this is the period in which respiration begins. No sooner is the infant born, than the air rushes into his lungs, respiration commences, and ceases only with life.

BUT, before the process of respiration is fully established, he is exposed to a very harsh treatment; nay, to a treatment torturing and tormenting. He is laid hold of by an unfeeling, unrelenting, and ignorant nurse, as fixed, steady, and determined, in her operations, as if she were about to do him an essential, most necessary, and indispensable service. Now his troubles are to begin. He must pass through the fiery ordeal of her hands, and of every common operation in all their minutiae. He must be washed, cleansed, and finely clothed; he must submit: for he has no

power of helping himself. He is doomed to suffer, and can only express his sufferings by bitter cryings ; and this he does, without the least redress, till every operation concerning him is finished, and put to an end.

BUT, before these are ended, he is almost ended himself. He is exhausted, fatigued, and worn out. The whole œconomy of his system is deranged ; and all the changes which begin to take place in his body at birth are thrown into confusion. To the commencement of respiration is added the torture of bitter cryings. His newly tried lungs, which should have no other action but the action of breathing, are thrown into the most violent and hurtful exertions. His whole body is strained, and his energies are exhausted. Sleep, his natural state, is driven from his eyes, and slumber from his eye-lids. In a word, he is thrown into the state of actual disease.

THESE are the effects of the common modes

of washing, cleansing, and clothing the new-born infant. But Nature herself cries out against them. The cry of Nature is heard in the cries of the infant. She calls aloud, that you may desist, yet her voice is not heard. You lend a deaf ear to her pleadings; and her strongest emotions are stifled by the influence of fashion, custom, and prejudice.

BUT the voice of Nature is plain and simple, and your course is straight before you. Remove from your infant every hurtful cause; every cause of crying; or every cause that can give him the least disagreeable or uneasy sensation; for be assured that they are all injurious. So soon as he is born, so soon as the function of respiration has taken place, and is established, let the moisture be absorbed from his skin, and let him be clothed in the most simple and expeditious manner; then let him be laid in a couch sufficiently warm, or take him into your own bosom, or lay him into the bosom of a nurse; there will he fall asleep, and continue to sleep, till he is ready

to receive, and you are ready to give him the breast.

THESE rules are simple, and easily practised. They may be practised in a very few minutes; they are consistent with Nature; they are consistent with the ease, comfort, and welfare of the infant; they are consistent with the changes which take place in his body at birth; they are consistent with his quiet, rest, and sleep, till these changes are fully established, to fit and prepare him for the reception of that nourishment which Nature all the while is preparing for him in your breasts.

Now, you will understand that you have nothing more to do, between the period of the infant's birth, and the period in which he is about to suck, than to dry his skin, clothe him simply, and lay him to rest. But he is not allowed to rest here; for, besides the absurdities of his dress, &c. he must be purged, forsooth; the meconium, as it has been termed, must be thrown out of his bowels, or else the worst consequences are supposed to ensue;

consequences, however, which exist more in the imaginations of men-midwives, midwives, and nurses, than in reality or in truth.

THIS meconium, this blackish sort of matter, is natural to the bowels. It is produced in the œconomy of the infant previous to birth ; it is necessary to his œconomy, or is a necessary effect of his œconomy ; it is destined to remain in his bowels till birth ; and, in a certain period after birth it is destined to be expelled.

ALL these things take place in the œconomy of Nature. In her œconomy the meconium is produced ; and in her œconomy it is expelled from the bowels ; for, previous to birth, the infant is nourished by your fluids, and all his organs are at rest* ; his lungs, his stomach, and bowels, as well as every organ concerned

* OR, if they be not at rest, they surely perform different functions from those which they perform after birth.

in preparing the digestive fluids *. But no sooner is he born than the air rushes into his lungs; respiration commences; his circulation is changed; he undergoes a total revolution. Those organs which were at rest are now roused into action; the digestive fluids are poured into the stomach and bowels; they excite the bowels to action; and then it is that the bowels discharge the meconium.

THESE are plain and simple matters of fact, and facts entirely consistent with the institutions and operations of Nature in the infant œconomy. If the infant be properly managed; if he be not thrown into the state of disease; if the changes which take place in his body, and in his bowels, be not interrupted or disturbed, assuredly, and most assuredly, the meconium will be discharged; for the one is a necessary effect of the other. The discharge

* THESE fluids are, the saliva of the mouth; the gastric fluid, which is prepared by the stomach; the bile, which is prepared by the liver; and another fluid, which is prepared by another organ.

of the meconium is a necessary effect of the changes which take place in the infant's body at birth ; and it could as soon cease to take place as these changes themselves, or the discharge of urine, or any other discharge, provided the infant be properly managed, and preserved in the natural and healthful state.

WHAT need, then, is there for their purgative and laxative drugs ; their oils and their syrups ; their solutions of sugar, of salt, of manna, and other abominations, which your midwives and nurses are so fond of administering ? No need whatever. They are as needless and unnecessary as they are destructive ; for there is not a single reason, nor a single principle in Nature, to suggest or defend their use.

IN this matter you have been greatly deceived, and led into error. You have been led into error, first by medical practitioners ; then by midwives and nurses ; and now you are fairly trammelled by custom and habit. You see the sickening and destroying potion

crammed down the infant's throat, without the least remorse, because you are told that it is right, and because it is customary to do it. You ask no questions about the matter. But you should ask a few questions on this subject; questions quite in point; and questions which would puzzle and perplex any one who is ignorant enough to advise you to purge your infants. You should ask what becomes of the young of the inferior animals? for they also have their meconium; yet they undergo no artificial purgation. How, then, do they get rid of it? They get rid of it in the œconomy of Nature; in the œconomy of their bodies; by the changes which take place in their bodies at birth; and by the first milk which they receive from their mothers. You should also ask what becomes of those infants who are not purged? for, surely, all nations, kindreds, and tongues, have not purged, nor do not purge their infants.

But why should I speak of these things? for this practice of purging the new-born infant is not the invention of Nature, but of

Man. Yet, in the name of wonder, how could it enter the mind of Man, that Nature, all-wise, all-provident, and all-perfect ; perfect throughout all her works, animate as well as inanimate, living as well as dead ; perfect throughout the whole animal and vegetable kingdoms, and throughout the whole universe ; should leave this matter at random ; should form the infant, and bring him into the world, with a substance in his bowels ready to corrupt his food, to produce disease, and to destroy him * ; that Nature should do this, and leave her work to be done or perfected by Man ; leave the safety and preservation of the infant, her best and noblest work, to this single contingency, that he should be purged by human art, without a single instinct or

* THESE are some of the notions which physicians have entertained about the meconium. But, in my next Discourse, I shall have occasion to notice their absurdity, as well as to show, when it is retained in the bowels, or not discharged in due time, that it is an effect, and not a cause of disease ; that it is disease in the infant, arising from other causes, which prevents its discharge.

principle to direct or point out the necessity or propriety of the practice : How could it enter the mind of Man that Nature should do this ? for it involves an evident, a monstrous, and a downright absurdity.

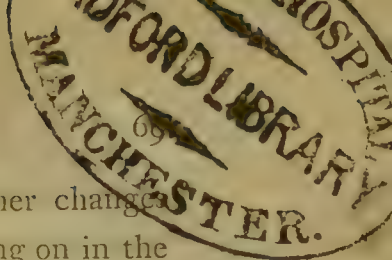
NATURE's ways are not as Man's ways, for she has left the infant in no such plight, in no such danger of destruction ; she has formed the meconium of his bowels perfectly safe and innocent, incapable of corrupting his food, or of causing disease ; and, when it is no longer fit or necessary that it should remain in his bowels, she has made ample provision for its expulsion, in the changes which take place in his body at birth, and in his mother's milk.

THESE are the causes which Nature employs to purge the meconium from the infant's bowels ; and, as they are the means which she employs, you may rest assured that they are exactly formed and fitted to effect the end or purpose which she has in view. And, were these means allowed to operate ; were they not disturbed in their operation ;

OF THE MANAGEMENT

were the infant properly managed in every respect; were his health preserved; and, were the œconomy of Nature, in his system, left free and undisturbed; had all these things their due and just attention, and the attention they loudly demand, you would find that, in every instance, his bowels would discharge the meconium soon after his birth; so soon as the changes which take place in his body at birth are established, or soon after he receives the first draught of your milk.

THE question, therefore, is, whether should Nature or art purge away the meconium from the infant's bowels? Now, you surely can have no hesitation in answering this question. But, lest your customs and prejudices should still hang over you, I will tell you, and I will tell you exactly, how the matter stands. Nature does it as Nature, and, believe me, her works are well ordered and sure. The safety, preservation, and welfare of the infant, are all her care. Her works are neither too hasty nor too slow. She does it at the time, and at the very time it ought to be done. She does it



suitably and agreeably to the other changes and operations which she is carrying on in the infant system. She first does one thing, and then another ; while order, regularity, and harmony, are above all, and in all she does. She does it suitably and agreeably to the infant's immediate health, and to the continuance and preservation of his health. In fine, she does it without pain or sickness, without disease or death.

CAN art do what Nature does? No. Nature, assuredly, brings health ; but art, as assuredly, brings disease. In every instance, the artificial purgation of the infant brings pain, sickness, and disease, and, in many instances, death. This is the true state of the matter, whether you believe it or not ; but Nature says it, who cannot lie. She spurns at the sickly, nauseous, and destroying potion ; but the infant must either swallow it or choke. And, after it is swallowed, what are its effects? Sickness, and hiccup at stomach, and frequent vomiting ; flatulencies, severe gripes, and purging at bowels ; the

most excruciating agonies that a living being can suffer, expressed in the most keen and piercing cries; writhing and twisting, and a thousand contortions of bowels, to get rid of the acrid and destroying drug; universal disturbance, derangement, and disease, throughout the whole body; all the natural operations, and all the changes which take place in the new-born infant, interrupted and disturbed; in short, the whole œconomy of Nature in the infant body thrown into confusion, and broken down; every symptom of universal disease; and, in many instances, convulsions and death to close the scene.

Thus have I told you exactly, and very exactly, how the matter stands between Nature and art; between the natural and artificial purgation of the new-born infant. In the œconomy of Nature it is done with the utmost order, regularity, and harmony, without pain or sickness, disease, or death. But, in the œconomy of art, all these effects are produced; however simple the substance; even a simple solution of sugar and water ferments in the

infant's stomach ; becomes acid, and first produces sickness at stomach, then it passes into his bowels, and produces the most severe gripes, pains, and purgings ; throws the whole œconomy of his system into confusion and disorder ; and, by the time he ought to suck, he will neither suck, nor fasten to suck ; for he is thoroughly and completely diseased.

SUCH are the effects of the artificial purgation of the infant ; and such also are the effects of another practice to which he is subjected ; I mean the feeding him with wheys, panadas, and gruels, before he is applied to the breast.

THE source of your error is this. You think that the infant may starve before you are ready to give him the breast. But this is a vain thought, for he is in no danger of starvation ; his blood is rich of nourishment, as it were ; he had a constant supply till the very moment of his birth ; and this supply is fully sufficient for the purposes of his œcomony till the changes of his birth are effected ; till his

own organs, his stomach and bowels, are ready to digest and prepare his nourishment, and till you are ready to give him the breast. Besides, how can you suppose that Nature would leave a matter, so essential to the welfare, the preservation, and existence of the infant, so ill contrived? And pray what does the young of the inferior animals get before the mother's milk is ready for them? No one thing whatever; it is ready so soon as they require it, or so soon as they are ready to receive it.

THIS is a universal law of Nature; a law which obtains with you, as well as with the inferior animals, that the milk of the mother is in preparation, and in readiness, at the very time her offspring require it, or are ready to receive it; or, in other words, the infant's necessity for food, and the mother's ability to supply it, exactly keep pace or correspond with each other.

FOR you perceive that your milk is not in readiness at the very time the infant is born;

but, at this time, its secretion begins, and, in a certain period, it is ready to be given out for his support and nourishment. Neither does the infant require it at the time of his birth ; nay, he is not in readiness to receive it. For, as the secretion of your milk begins immediately after his birth, so also do the changes of his body* ; and, till these changes be effected,

* IN speaking of the discharge of the meconium, I had occasion to speak of these changes, as well as of the digestive fluids. By the time that your milk is in readiness, the changes of the infant's birth are effected ; his digestive fluids are duly prepared ; he sucks, and receives it into his stomach and bowels. There it is mixed with his digestive fluids, and by this mixture it is digested. In the act of sucking it is mixed with the saliva of the infant's mouth ; then it passes into his stomach, where it is mixed with another fluid (the gastric fluid) ; then, in a certain period, it passes into his bowels, where it is mixed with the bile, and with another fluid, to complete and perfect its digestion ; then, in its passage through the bowels, the nourishment is taken from it, and the refuse is left. The nourishing part is conveyed into the blood of the infant, and the refuse is discharged by stool. In short, the result of the whole is the nourishment of the infant.

the milk cannot be digested, or turned into nourishment.

THE fact is simply this : That, instead of nourishing the infant, by feeding him before your milk is in readiness, or before the changes of his birth are effected, you only load his stomach with a substance it cannot possibly digest *. As in purging away the meconium from his bowels, you derange his whole œconomy ; and you disturb the changes of his birth. You bring him real starvation ; for the substance you give him is not digested ; and, when he gets your milk, neither is it digested ; because his physic and his food have thrown his stomach and his bowels into the state of disease ; and this disease is displayed in flatulencies, purgings, and gripes ; in green,

* EVEN in advanced infancy, your wheys, ale-berries, panadas, and gruels, cannot be properly digested. How, then, can they be digested immediately after the infant's birth, before it is to be supposed that the changes of his birth are established, at a time when even the milk itself would not be digested ?

sour, slimy, curdled, and offensive stools ; and his want of nourishment is soon displayed in emaciation and leanness, and softness of flesh.

Nor is this all ; For you not only bring severe and lasting disease to the infant, by feeding him before he sucks, but also severe injury to yourselves. While the infant is thus diseased ; while he is tormented with severe flatulencies and gripes ; while he is kicking, and crying, and writhing in agony, he will neither suck, nor fasten to suck. He is applied, and re-applied to the breast ; but still he refuses to suck. Thus are you teased, fatigued, and worn out ; yet often your breasts become gorged, and distended with milk. Now your nipples are sore and inflamed ; now have you swellings and suppurations in your breasts, milk fevers, and milk sores. The whole œconomy which Nature has established between you and your infant is thrown into confusion. But one link in the chain broken, one institution of Nature perverted, and the whole fabric falls to the ground ; the most untoward and direful consequences ensue.

BE it your business, therefore, to prevent these consequences. Preserve this link, this simple yet beautiful fabric entire ; preserve the connection which the wisdom of Nature has established between you and your infant, in the most strict and sacred manner. Be not forgetful, but pay the most sacred regard to this sovereign and universal law of Nature ; that the mother's ability or readiness to supply the infant with her milk, and his necessity for food, exactly keep pace and correspond with each other.

THE regularity of this law of Nature, however, supposes that the health of both mother and infant be preserved. It supposes, first, that the mother has had a natural labour ; that she has not been mismanaged during delivery, nor injured by ignorant and officious care ; and that she falls into no general disease. And it is supposed, secondly, that the operations of Nature, in the changes of the infant's birth, be left free and undisturbed ; that he be not thrown into disease, as in the common modes of his management. In a word, the regula-

rity of this law of Nature supposes and implies, that the health of both mother and infant be preserved ; and then the secretion of her milk will exactly keep pace with the changes of his birth ; it will exactly keep pace with the infant's need of nourishment.

It is no part of my present subject to treat of the management of the in-lying state, or to point out the modes by which your health is to be preserved, that the secretion of your milk may go on in the natural course, and meet the infant's need of nourishment. But this I will contend, that the proper management of the infant is a part, and a most material part, of your management ; that, if he be thrown into disease, you must suffer the same fate ; that if, by disease, he does not suck at the time which nature has appointed, but is either too soon or too long in sucking ; sucks either too much or too little ; or, if you have violent struggles and fatigue in getting him to fasten to the breast, so that he scarcely sucks at all, and that your breasts become gorged and distended with milk ; in short, if,

in this manner, the regular order of that connection, which the wisdom of Nature has established between you and your infant, is thrown into disorder and confusion, neither can you escape disease, sore nipples, or swellings and inflammations in your breasts, milk fevers, and milk sores.

Would you, therefore, avoid these ills, preserve the health of your infant entire. Treat him according to the rules of Nature, and do away those customs and practices which throw him into the state of pain and disease. Dry his skin in the most gentle manner; clothe him simply; expose him not to cold; let his physic and his food be your own milk *. In a word, do away every thing that has the least tendency to make him scream or cry; preserve his natural state; the state of quiet rest and

* It is wonderfully adapted to these purposes. The first draught serves as his physic, and all the rest as his food or nourishment. Any one thing else is sure to produce pain and disease.

sleep; and give him the breast so soon as he shows an inclination to take it.

THESE simple rules comprehend the whole management of the infant, from the period of his birth till the period in which he should suck. And, if you apply them judiciously, you will preserve, first, your infant's health, and then your own. You will prevent all the evils, and all the sufferings you experience in the early period of your nursing. For, if you preserve your infant's health, and leave the operations of Nature which take place in his body at birth free and undisturbed, the law of instinct will guide him. He will neither be too soon nor too long in sucking; neither suck too much nor too little; but will suck at the very time which Nature has appointed; at the very time he ought to suck. And, if you have had a safe delivery; if you have been properly managed during your delivery, and after your delivery, the secretion and preparation of your milk will meet his need of nourishment. In fine, if your own health, and the health of your infant, be pre-

served, you will see the order of that connection which Nature has established between you and him entirely sustained; this law of Nature completely fulfilled; your ability or readiness to supply him, and his necessity or desire for food exactly keeping pace and corresponding with each other. You will see that you have milk sufficient; and you will see the infant disposed to suck. You will see the work of nursing fairly begun, and begun without trouble, pain, or disease.

AND, that it may go on and end in a similar manner, I shall now proceed to consider the management of the infant from the period in which he is applied to the breast till towards the period in which he should be weaned.

It has been one of my leading objects to point out to you, that the first thing the infant should receive into his stomach is your own milk. Now I must show you that it is his only true and proper food; for still you are not sufficiently aware of the connection

which Nature has established between you and your infant. You are not aware, that though he be apparently separated from you at birth, he is not separated from you in reality ; not aware that he still hangs and depends upon you for his support and nourishment ; or else why do you give him over to the suckling of a hireling ? or, if you do suckle him yourself, why do you feed him with other substances, as if your own milk were only a thing of secondary consideration ?

BUT, if your own milk be not his only true and proper food, why are you so formed ? Why does the secretion of your milk immediately succeed to the birth of the infant ? Why is it in preparation and in readiness at the very time he requires it, and at no time else ? That it is his only true and proper food there can be no question. Nature, throughout all her œconomy, and all her works, does not present a more clear, obvious, manifest, and indisputable fact. It is as clear as the sun itself ;

it is an institution of Nature, fundamental, and therefore fixed, stable, and immutable.

With these things, before the eyes of the whole world, is it not astonishing that any other sort of food should ever have been proposed for the infant than his mother's milk? But be assured, that no other production of Nature, nor no work of art, can supply its place. Even the milk of another woman is not the proper food of your infant. Your own milk is his only true and proper food; for he is a part of yourself. You gave him existence, and you brought him forth. By your fluids was he nourished while yet in the womb; and thus speaks Nature, by your fluids shall he be nourished for a certain period after he is separated from it; for now his nourishment flows in another channel. Instead of flowing towards the womb, it flows towards the breasts: there it appears in the form of milk; and from thence the infant instinctively draws his nourishment.

BEHOLD, then, the order, the regularity, and

the connections of Nature. See the infant nourished by your fluids, and brought to a certain degree of perfection, while yet in the womb. See him separated from it, and then see his nourishment flowing in another channel. See the secretion and preparation of the milk ; the increasing size of the breasts, and the formation of the nipples. Behold, then, the œconomy of the infant himself ; see him instinctively taught to search for the breast, and to suck the breast ; to draw his nourishment from a new source, yet still from your body, and from your fluids.

CAN you behold these things without admiring, adoring, and reverencing the wisdom of Nature ? Can you behold them without seeing the manifest connection which Nature has established between you and your infant ? Did you see this connection sufficiently, you would neither give him over to the suckling of another woman, nor would you feed him with any other substance than your own milk.

But, while you do these things, Nature stands appalled. She shudders at the violence done to her institutions and her laws ; and she trembles for the safety of her noblest production. Her œconomy is overthrown, and her institutions are perverted. Confusion succeeds to order ; disease to health ; and often and often the last result is death.

YOUR mistakes and errors, in any other part of the management of the infant, are somewhat excusable, because you have no obvious institution or law of Nature to guide your steps. But here you are totally without excuse ; for you have an institution in yourselves, and an instinct in the infant staring you broad in the face ; an institution and an instinct which point out your conduct in the strongest light. And, as if this were not enough, you have the œconomy of the inferior animals to guide you, and to show forth your errors in the strongest possible point of view.

VIEW, therefore, the œconomy and instincts

of the inferior animals, and there you will behold every animal, who suckles her young, suckling her own offspring, and feeding them with no other food than her own milk. There you will behold some of the feathered tribes in quest of food exactly suited to the nature and digestive powers of their tender and delicate offspring, while others of the same tribes take the food into their own stomachs, there to undergo a certain preparation, and from thence to be disgorged into the stomachs of their young. And there, also, you will behold some of the insect tribes depositing their eggs in situations most favourable for hatching and affording proper nourishment to their progeny ; and others of these same tribes laying up with their eggs a store of food to be in readiness for their offspring so soon as they are hatched and brought forth. So soon as they escape from the egg they find a supply of food exactly suited to their nature *.

* WERE the suckling animal to deny her milk to her offspring, or to feed them with any other sort of food ; were the feathered tribes to fail in gathering the natural food of their young, or to fail in taking it into their own

Thus you observe that Nature has appropriated a particular food for the young of every animal ; and, by instinct, the parent animal does actually supply them with this food, and with no other.

How comes it, then, that you are the only transgressors against Nature : against her institutions, her instincts, and her laws ? With the inferior animals have you not the same institutions, instincts, and laws of Nature to direct you ? With those animals who suckle their young have you not the same organs to secrete and prepare the food of your infants ? Have you not the power of instinct plainly set before you ; Nature's instinct, by which your infants

stomachs, to adapt it to their digestive powers ; and were the insect tribes to deposit their eggs in situations where their progeny could not find their natural food, or to fail in laying up with their eggs a store of Nature's food, to be in readiness when they are hatched and brought forth ; were the instincts of Nature to fail in these things, disease and death to the whole of these different classes of animals would most infallibly ensue ; each individual race would become extinct.

are led to search for the breast, and to suck the breast? Moreover, have you not reason to tell you in consideration of your own formation, the formation of your breasts, and the secretion and preparation of your milk, that it is the only true and proper food of your infants?

Now, should you not be convinced of this fact, I know not how to convince you. If the formation of your breasts; the secretion and preparation of your milk, immediately after your delivery, and for a certain time after your delivery; the instinct of the infant himself; the œconomy and instincts of the inferior animals; in short, the whole analogy of animal Nature, in providing a food, or being provided with a food, exactly suited to the nature and condition of their infant offspring; if these things will not at once convince you of the strict connection which Nature has established between you and your infants, that your own milk is their only true and proper food; and, by implication, that every other must be hurtful and destructive, you must re-

main sceptical forever, and be given up to your own delusions.

BUT let us see what these delusions are, or what the grounds are on which you do not nurse ; or, if you do nurse, why you also feed the infant with other substances, as if your own milk were only a thing of secondary consideration.

Now, one of your reasons for not nursing is that you have no milk. This, to be sure, may happen ; you may be mismanaged ; you may fall into disease about the time of your delivery. On this account, the secretion of your milk may either be altogether prevented, or it may not take place at the natural and ordinary time. But, bating mismanagement and disease, the secretion of your milk will undoubtedly take place. You must have milk, for Nature has determined it. She has determined, that, so soon as the infant is born, the nourishment which he received in the womb shall be turned into the breasts, there to ap-

pear in the form of milk, for the continuance of his support and nourishment.

WHAT, then, can prevent you from nursing, when you have not been mismanaged; when you fall into no disease; when the secretion of your milk takes place in the natural and ordinary course? Yet, even in this case, you frequently say that you have not a sufficiency of milk! or that it is poor and thin, and not sufficiently nourishing!! or windy and unwholesome, causing disorder and disease in the stomach and bowels of the infant!!! On one or other of these grounds you either do not nurse at all, or you nurse, but feed the infant also with other substances; with panadas, gruels, &c.

BUT let me ask, are you not a mother? Have you not nursed and nourished your infant in the womb? And have you not brought him into the world naturally and properly formed; a mature and a perfect infant? You have performed the one half and the first part of your duty, and you have performed it na-

turally and properly. Why, therefore, should you not perform the last part as well as the first? Are your fluids more scanty after the infant's birth than they were before it; or more poor, or more thin, or less nourishing, or less wholesome? In a word, have you suffered any change since the infant's birth; or have you fallen into any disease? If not, why should you not nurse and nourish your infant at the breast as well as in the womb? There is surely no one thing to prevent it, unless there be something wrong in the original formation of your breasts, or unless you want nipples.

How then does it happen that so many mothers do not nurse? Do all such mothers fall into disease? Or is there any thing wrong in the formation of their breasts? Or do they want nipples? Or are they unwilling to nurse? Or are they advised not to nurse, by being told, that, by nursing, they would injure both themselves and their infants?

If there be a mother in existence unwilling to nurse her infant, let her see to it. If there

be a mother lost to these ties of Nature, she is lost indeed. And if there be any one who would advise a mother not to nurse, by telling her that it would be injurious either to herself or her infant, or to both, he is the enemy of society; perverts the obvious and established laws of Nature; nay, may be said to be the destroyer of health, and even of life.

It is too true, however, that there are such advisers; such who tell a mother, that, by nursing, she will injure both herself and her infant; that, being delicate, her health will be impaired; and that, for the same reason, she will be incapable of furnishing milk, either in due quantity, or of a proper quality.

But when the opinion is held forth to you, that by nursing your infant your health will be impaired, you should also be told how or why this should happen. I suspect, however, that you would get no solid account of the matter; for it is repugnant to Nature, and, therefore, must be unfounded and absurd.

What is pregnancy? Is it a disease? No, It is neither a disease, nor, properly speaking, the cause of disease; it is a natural and a healthful condition of the female body. What is the secretion of the milk? is it a disease, or the effect of disease, or a cause of disease? No. It is a natural and a healthful function; and, if a woman's constitution be so healthful as to render her susceptible of pregnancy, and of being a mother, it is as natural that she should nurse her infant, as it is natural she should breath the breath of life *.

* “ As I have not the honour to be an Atheist, I firmly believe that women by nature are just as able to bear and nurse children, * * * ”

Nay, I believe they are made for those very purposes, and so well qualified for them, that it would contribute greatly both to their health and happiness, if they were constantly employed either in breeding or nursing children, for five and twenty or thirty years of their lives. Every body knows the reason for which the bearing of children was made a work of great pain and labour; but it was no part of the sentence passed on Eve, and her female descendants, that it should be also a work of danger, or any thing like a disease. There is much reason to suspect that the danger and the diseases often connected with child-bearing

WHAT then must happen if a mother does not nurse her infant ? Disease must happen. For, by so doing, she violates the laws and institutions of Nature, which cannot be done with impunity ; cannot be done without throwing the constitution into disorder and disease ; into disease both general and local ; swellings, inflammations, and suppurations in the breasts ; milk-fevers, and milk-sores. Besides, if a mother does not nurse her infant, her constitution is either so much injured that she becomes barren ; or, if this should not happen, she becomes pregnant again, and the injurious effects of frequent child-bearing without nursing are not to be told. The constitution may stand it out a while ; but, at last, derangement of

are produced by our own preposterous management, and our absurd contrivances and interference, in order to assist Nature in one of her most important operations ; which, like all the rest of them, is contrived with perfect knowledge and wisdom.”—Additional Memorial to the Managers of the Royal Infirmary.—By James Gregory, M. D. Fellow of the Royal College of Physicians, Professor of the Practice of Physic in the University of Edinburgh, and First Physician to his Majesty in Scotland.

constitution and disease will come ; premature old age, and premature death *.

How, then, is it to be understood, that by nursing her infant, the health of any mother will be impaired ? If she does not nurse, she either becomes barren or pregnant again ; and, if she becomes pregnant, why may she not as well nourish the former infant at the breast, as nourish another in the womb ? In doing the former she is acting in obedience to the laws and institutions of Nature ; in doing the

* “ ANOTHER great inconveniency attending the neglect of nursing, is the depriving women of that interval of respite and ease which Nature intended for them between child-bearings. A woman who does not nurse has naturally a child every year ; this quickly exhausts the constitution, and brings on the infirmities of old age before their time ; and, as this neglect is most frequent among women of fashion, the delicacy of their constitutions is particularly unable to sustain such a violence to Nature. A woman who nurses her child, has an interval of a year and a half, or two years, betwixt her children, in which the constitution has time to recover its vigour.”—Comparative View of the State and Faculties of man with those of the Animal World. By the late Dr Gregory.

latter she does the very reverse, and therefore must receive injury. By nursing, the health of a delicate mother is generally improved; but, by not nursing, it cannot fail to be impaired*.

BUT, as another reason against nursing, you are told that you will be incapable of furnishing your infant with milk, either in due quantity, or of a proper quality. Let it be remembered, however, that you nourished this very same infant

* “ THERE are many disorders incident to women, of which nursing is the most effectual cure; and delicate constitutions are generally strengthened by it. In proof of this, we may observe, that while a mother nurses her child, her complexion becomes clearer and more blooming, her spirits are more uniformly chearful, her appetite is better, and her general habit of body fuller and stronger. And it is particularly worthy of observation, that fewer women die while they are nursing than at any equal period of their lives, if we except the time of pregnancy, during which it is unusual for a woman to die of any disease, unless occasioned by some violent external injury.”—Comparative View of the State and Faculties of Man, &c.

in the womb, where you could have no interference with the institutions and operations of Nature, and where you could nourish him with no one thing else than the product of your own fluids.

CONTINUE, therefore, to do so ; suckle your infant, and continue to nourish him with the product of your own fluids ; for no other production of Nature, nor no work of art, can supply its place. Even the milk of another woman is not a proper food for your infant ; for it is foreign to his nature ; it is not a product of the fluids by which he was formed and nourished in the womb. Some time has also elapsed since another woman's delivery. Her milk is not the milk of a woman newly delivered ; it has undergone a change ; it is not adapted to the digestive powers of the newborn infant ; it is considerably indigestible in his stomach ; it produces disease in his stomach and bowels, and which disease continues till by habit his stomach acquires the power of digesting it ; a power, however, which it may

not acquire during the greater part of the period in which he is suckled *.

* “ It is not easy to estimate the injury children sustain by being deprived of their natural nourishment, and, instead of it, being suckled by the milk of women of different ages and constitutions from their mothers. Thus far is certain, that a greater number of those children die who are nursed by strangers, than of those who are suckled by their own mothers. This is partly owing, however, to the want of that care and attention which the helpless state of infancy so much requires, and which the anxious affection of a mother can alone supply. Indeed, if it was not that nurses naturally contract a large portion of the instinctive fondness of a mother, for the infants they suckle many more of them would perish by want of care. But it should be observed, that this acquired attachment cannot reasonably be expected among nurses in large cities. The same perversion of Nature and manners which prevails there among women of fashion, and makes them decline this duty, extends equally to those of lower rank : and it cannot be supposed that what the call of Nature, not to speak of love for the husband, is unable to effectuate in the mother, will be found in a hireling, who for a little money turns her own infant out of doors. But, though it is true that a nurse may acquire by degrees the solicitude and ten-

BUT if the milk of another woman be considerably indigestible in the stomach of your infant, what must those substances be which art affords, as panadas, ale-berries, and gruels? The stomach of an infant could almost as soon digest stones, as it could digest these substan-

derness of a mother, yet as this takes place slowly, and only in proportion as habit takes the place of Nature, the neglected child may perish in the mean time. There results, even from this possible advantage, an inconvenience which is itself sufficient to deter a woman of any sensibility from permitting her infant to be suckled by another; and this is, to have a stranger partaking with, or rather alienating from, her the rights of a mother; to see her child love another woman as well, or better than herself; to perceive the affection it retains for its natural parent a matter of favour, and that of its adopted one a duty: for is not the attachment of the child the reward due to the tender cares of a mother †? The many loathsome diseases to which the lower class of women in large cities are subjected, is another reason against their being intrusted with such an office; diseases which are often fatal to their little charges, or which taint their blood in a manner that they and their succeeding families may feel very severely.”—Comparative View.

† Rousseau.

ces. Accordingly, they never fail to produce the most severe and destructive disease, first in the stomach and bowels, and then throughout the whole frame. They cannot be digested themselves, and they prevent the digestion of the milk. It runs through his bowels, and it passes from them curdled and undigested. The source of nourishment is thus cut off from his system. Emaciation and leanness, and softness of flesh ; general derangement, disease, and death, succeed. This very thing is the great source of all the torture and all the ills of infant humanity. You are often told, and you as often think that you are incapable of furnishing milk, either in due quantity, or of a proper quality : But the one half of this very milk will do more towards the infant's nourishment, given alone, than the largest quantity his stomach could receive conjoined with any other substance. For, given by itself, the functions of the infant's stomach and bowels are naturally and healthfully performed ; the milk is thoroughly and completely digested ; and every particle of its nourishing part is taken into the

blood, and into the system of the infant ; processes which are greatly impeded and interrupted by the addition of any other substance.

BE advised, therefore, to suckle your infants, and to feed them, during the greater part of the period in which they should be suckled, with no substance but your own milk. Imitate the conduct of all the inferior animals whom Nature intended to suckle their young ; of the mothers of rude and savage nations * ; of “ the most polished in the purest ages of Greece and Rome ;” of the mothers of Holland, Italy, of Turkey, and of all the Levant, whose infants taste nothing but their own milk till they be a year old. Imitate the praise-worthy conduct of these mothers. It is a duty incumbent on you in every view of the subject ; in a physical view, as being conducive to your own health, and to the health

* WHAT think you of the Canadian savages, who nurse their children four or five, nay sometimes six or seven years ? It shows, at least, that milk is not so scarce as some pretend.

and preservation of your infants ; in a moral view, as tending to reform the manners of the age * ; in a political view, as a mean to multi-

* “ WOULD you have mankind return all to their natural duties, begin with mothers of families, you will be astonished at the change this will produce. Almost every kind of depravation flows successively from this source ; the moral order of things is broken, and Nature quite subverted in our hearts ; home is less chearful and engaging ; the affecting sight of a rising family no more attaches the husband, nor attracts the eyes of the stranger ; the mother is less truly respectable whose children are not about her ; families are no longer places of residence ; habit no longer enforces the ties of blood ; there are no fathers’ nor mothers’ children, brethren nor sisters ; they hardly know, how should they love each other ? each cares for no one but himself ; and, when home affords only a melancholy solitude, it is natural to seek for diversion elsewhere.

“ But should mothers again condescend to nurse their children, manners would form themselves ; the sentiments of Nature would revive in our hearts ; the state would be re-peopled ; this principal point, this alone would re-unite every thing. A taste for the charms of a domestic life

ply the number of inhabitants, and thus to increase the riches, the strength, the support and defence of the state ; and, even in a religious view, as acting in obedience to the Author of Being, who has laid this command and this duty upon you, through the laws and institutions which he has established in his works *,

is the best antidote against corruption of manners. The noise and bustle of children, which is generally thought troublesome, becomes hence agreeable ; they render parents more necessary, more dear to each other, and strengthen the ties of conjugal affection. When a family is all lively and animated, domestic concerns afford the most delightful occupation to a woman, and the most agreeable amusement to a man. Hence, from the correction of this one abuse, will soon result a general reformation ; Nature will quickly re-assume all her rights. Let wives but once again become mothers, and the men will presently again become fathers and husbands.”—ROUSSEAU.

* “ Even the sea monsters draw out the breast, they give suck to their young ones : the daughter of my people is *become* cruel, like the ostriches in the wilderness.”

BUT let me now go on to consider the other parts of the infant's management ; and here I must carry you back to the period of his birth.

You already know that the infant, previous to birth, inhabits a medium very different from the medium of this world ; that, for one thing, the degree of heat is widely different ; that the internal heat of the mother is much higher than the common temperature of our atmosphere, and even higher than the common heat of the apartment in which the infant is born. It therefore follows, that the infant, at birth, undergoes a very material change in regard to temperature ; and it also follows that I should give you some account of this change, or some account of the laws of heat, in as far at least as the living body is concerned.

THE internal heat of our bodies, then, is higher than the common heat of our atmosphere. Now, how does this take place, or

how is it produced ? It is produced by the process of respiration : there is a constant production of heat in the lungs, which is diffused throughout the whole body. But, as this production is constant, how is it that the internal heat of the body does not become too high, or that it does not get over-heated ? It is because there is a constant escape of heat from the body to the atmosphere. Were heat a visible substance you would see it constantly issuing from every pore.

Now, this being the case, that heat is constantly passing off from our bodies to the atmosphere, it follows that it must pass off in a higher or lower degree, according to the heat of the atmosphere. For example, in a day of keen frost, it passes off in a high degree ; hence the sensation of cold. In a mild day it passes off in a lower degree ; hence we feel agreeable. In a warm day it passes off in a still lower degree ; hence we are oppressed with heat. And, were the temperature of the atmosphere to rise higher than the internal

temperature of our bodies, instead of heat passing from our bodies to the atmosphere, it should pass from the atmosphere into our bodies; and this would actually take place, were it not that the sweat flows from every pore, and still keeps up the escape of heat from our bodies to the atmosphere.

A KNOWLEDGE of these laws of heat is of the highest importance in a medical point of view. By this knowledge we understand how the body is preserved in health, and how it is injured and thrown into disease by heat; for, when heat passes off from the body in moderate, or in due proportion, health is preserved; but, when it passes off either in too high or in too low a degree, or when these degrees suddenly alternate, as when the temperature of the atmosphere changes suddenly from cold to heat, or from heat to cold, disease is produced.

Now, let us see in what condition the infant stands in regard to temperature. Previous to birth he enjoys the internal tempera-

ture of his mother ; his body is of the same temperature with her body ; and, generally speaking, no heat passes either into it or from it. But no sooner is he born than his respiration commences ; his own lungs are now the source of heat to his system ; and now heat passes off from the surface of his body, in a higher or lower degree, according to the temperature of the apartment in which he is born, or according to the nature and temperature of the substances which are applied to his body.

Thus the infant at birth undergoes a sudden and a material change, not only in the laws, but also in the degree of temperature ; so sudden and so material, that it is wonderful he does not suffer in every instance. But the provisions of Nature are equally wonderful ; and, when he does suffer, it is owing to preposterous management.

THE management of temperature, therefore, is a point of high importance in the treatment of the infant. It runs through, as it were,

and is connected with, every part of his general treatment. It is to be considered in his dress; in his covering while asleep; in his bathing or washing; in his treatment in the house, as well as out of it; in his air and exercise, &c. In short, with a competent knowledge of the management of temperature, you could scarcely go wrong in any part of the general treatment of the infant.

It is impossible, however, to lay down any fixed or determinate principle in regard to the management of temperature, or to speak of it with thermometrical precision. Yet it is to be understood that the heat of the infant's body should not be allowed to pass off either in too high or in too low a degree, and that he should not be exposed either to sudden or to material changes of temperature. Keep these principles in view, therefore, while I endeavour to instruct you in this subject.

Now, when you reflect on the laws of heat, and on the sudden and material change of tem-

perature which the infant necessarily undergoes at birth, it must occur to you that this change should be made in the most gradual and imperceptible manner ; that, in fact, the infant should not be exposed to any sensible degree of cold, even for the shortest period.

ON these principles, as well as for the sake of the infant's ease and freedom of motion, I have advised that the moisture should be quickly absorbed from his skin, and that he should be clothed in the most simple and expeditious manner ; that his head should be covered with a simple cotton cap, lined with flannel ; his body, as well as his legs and arms, with a soft and loose cotton shirt ; and that he should then be wrapped into a fine soft and warm flannel wrapper, and laid to rest ; laid into a couch sufficiently warm, or into your own bosom, or into the bosom of a nurse.

Now this dress I hold to be most fit for the infant during the first month, and even during the greater part of the second ; for, during

this period, the state of sleep is his natural state ; and he is only roused from it by disease and pain, and improper treatment. Were he properly treated he would be quiet and torpid as it were ; he would only wake to suck, and suck to sleep. Besides, both Nature and reason declare that rest and warmth are highly requisite in early infancy *, and the latter cannot be had in due order without a strict attention to the former. Confine the infant, therefore, to his couch †, either in the apart-

* THE feathered tribes brood over their young, and many of the suckling animals prepare a nest for warmth before they bring forth.

† You may perhaps wonder that I do not recommend the cradle. But, on the other hand, I wonder that it should ever have been employed. It is true, indeed, that it stuns an ill-managed, fretful, crying infant, and throws him into a forced sleep ; but remember that the sleep of Nature and the sleep of art are two very different things ; and, to produce the sleep of Nature, you have only to manage the infant properly, and to keep him free from pain and disease, and then your cradles may be consigned to the garret.

ment in which he was born, or in an apartment immediately adjoining, and let him only be raised for the purpose of being gently cleaned or suckled.

But how different is the common treatment

LET the infant, therefore, be properly managed, and let the bed or couch be his place of rest. There he lies at perfect ease ; there he enjoys an equable and a moderate degree of warmth ; and there he enjoys the sleep of Nature, while the smile of pleasure sits upon his brow. But, bundled up in the cradle, and in the cradle-blanket, his sleep is unnatural, short, and disturbed. Besides, he rises from it over-heated, and in perspiration ; and he returns to it with all the effects of cold.

THE too common practice of bundling up the infant in his night-clothes I would also notice. During the night he is often warmer clothed than during the day ; and to make every thing snug, forsooth, a string is tied round his legs. Here, again, he is overheated ; and, by the least change of temperature, he suffers the common effects of cold. In all you do, see that the heat of the infant's body be not allowed to pass off either in too high or in too low a degree, and that he be not exposed to sudden and material changes of temperature.

of the infant? Instead of being kept at rest, and in a moderate and equable degree of warmth, he is bathed or washed with cold water *; he is shaken and tossed about in the

* At present I shall not enter into the merits of the cold bath, nor try to ascertain how far it may be considered as a strengthening power. But this I will maintain, that bathing or washing the infant in cold water is an absurd, a cruel, and a hurtful practice. It is absurd, because it is founded on no good principle; it is cruel, because it gives the infant the most disagreeable feelings, as is well evinced by his keen and piercing cries; it is hurtful, because it abstracts the heat in too great a proportion from his body, and therefore produces weakness instead of strength; chillness, languor, and depression; weakness and palsy in his legs; cramps and pains in his bowels; in a word, it is a powerful cause of disease.

HAVE you, therefore, any bowels of compassion for the feelings of your infant, or any wish to preserve his health, lay aside this practice. Render the water you employ in his bathing or washing agreeable to his feelings; continue to use it at this temperature for a certain period; and then bring it gradually and imperceptibly to a lower temperature, as the infant becomes more and more accustomed to the things of this life, and to the power and influence of temperature.

nurse's arms, and on her knee ; carried through the house, and into different apartments of the house ; carried even without doors ; exposed to light, and to various temperatures ; introduced to strangers ; in short, introduced into the world at once, as if he were a perfect man, at the very moment of his birth *.

Now, the whole of this treatment is inconsistent with the state and condition of the infant. It is inconsistent with his structure, with his powers, with the change of temperature which he undergoes at birth, and with his quiet, rest, and sleep ; it is inconsistent with every rule which Nature would seem to dictate in his treatment.

CONSIDER that he is but an infant ; that his structure is delicate, and that his powers are weak ; that he is but an early visitor in this scene of things ; that he is not accustomed to the action of the powers which now operate

* The effects of this treatment are many painful feelings to the infant, and disease, cough, difficulty of breathing, and asthma ; stuffing of the nose, sore eyes, &c.

on his body ; and that he is neither habituated to sudden nor material changes of temperature. Consider also the temperature he enjoyed previous to birth ; and that all sudden changes of temperature are dangerous.

WHEN you consider these things, you must see the propriety of treating the infant with rest, and warmth, and sleep, during the period of early infancy. In the progress, however, or towards the end of the second month, his dress may be changed, for his powers are now somewhat unfolded, and he is accustomed, in some degree, to the action of the powers which now operate on his body. But this change of dress I need not particularize. You know the principles on which it ought to be formed. It can scarcely be too simple, too readily, or too easily put on. It should neither be too warm, nor too cold ; that is, it should neither allow the heat to pass off in too high nor in too low a degree, from the infant's body ; it should preserve his body in a moderate degree of temperature ; and it should be increased or diminished according to the season of the year,

the temperature of the atmosphere, his exposure to cold, the state of his health and strength, &c.

With this dress you begin to carry the infant through the house, into different apartments of the house, and even without doors. You introduce him gradually to lower degrees of temperature, and to changes of temperature.

THE term air and exercise are in the mouth of every one. These powers are prescribed at all hands to the young, the old, and the middle aged; the weak and the strong; the diseased and the healthful; the infant and the adult; without the least regard or consideration of circumstances. The infant is sent abroad to air and exercise in the most inclement season, and even in the coldest day, one can scarcely turn round without being shocked by the sight of an infant carried starving and motionless in his nurse's arms.

BUT where is the need of this treatment,

or what benefit can the infant derive from it? Is his apartment unclean, or is its air contaminated? Is it unfit for the purpose of respiration, or unfit to preserve his health? Or may not his apartment be ventilated? Or is there no other apartment in the house of a genial temperature, where he may have a change of air, should such a change be necessary? Surely, in most instances, the infant may be supplied with air sufficiently pure without being exposed to all the risks and injuries of temperature.

BUT to send an infant abroad in the view of exercise is truly ridiculous; for where is the exercise of being carried motionless in a woman's arms? The exercise is to her, and not to the infant. By the exertion of walking, and of carrying the infant, the heat of her body is preserved, her feelings are kept agreeable, and she receives no injury; while the poor helpless innocent, motionless in her arms, is losing heat every moment; is starv-

ing alive as it were ; is suffering all the pains and injurious effects of cold *.

Now, the difference between the woman who carries the infant, and the infant himself, must strike you. She can walk and exert her own muscles. By this power of action all the injurious effects of temperature are prevented, and she receives all the advantages and all the benefits of air and exercise. But the infant has no such power, and therefore cannot receive the true benefits of air and exercise till he acquires it ; till he is able to walk and to exert his own muscles.

BUT do not misunderstand me. I mean not to say that the infant should be entirely confined to the house till he is able to walk and to exert his own muscles ; that he should scarcely see the light of day ; or that he should be reared like the plant of a hot-house.

* BESIDES, it often happens that infants suffer distortion by being carried so much in one position.

This is the one extreme, while the common mode of his treatment is the other. Endeavour, therefore, to steer the middle course : Act cautiously and judiciously, and see that the heat of the infant's body be neither allowed to pass off in too high, nor in too low a degree, and that he be not exposed to sudden and material changes of temperature. View him at birth as undergoing very important changes, and as entering into new connections—into a connection with heat, air, and aliment ; by the due application of which his life and his health are to be preserved and continued ; while, by their undue or disproportionate application, he is to be thrown into disease. Consider the infant, therefore, as an infant, and apply these powers to his body in the most mild and gentle manner. Treat him not as if he were considerably advanced in life, or as if he were able to walk and to exert his own muscles ; but introduce him gradually to lower degrees of temperature, and to changes of temperature ; to air and exercise ; to new sorts of food ; to the world, and to the things of the world, as his structure becomes

more and more vigorous, and as his powers are unfolded.

Now, after these observations, I need not enter into a minute discussion concerning the management of the infant during the process of weaning. Allow me, however, to offer a few general remarks on the mode in which this process ought to be conducted.

BUT here you may naturally ask, at what particular period should the infant be weaned? To this question, however, it is not easy to give a decided answer. But, in order to make some approach towards it, I would direct your attention to the progress of the infant's teething.

OBSERVE, then, that the function of the teeth is necessary to the process of digestion. By the teeth the food is masticated; in the act of mastication, it is mixed with the saliva of the mouth; by this division and this mixture it is prepared to undergo the process of digestion; and without this preparation, it is

not to be supposed that the food can be naturally or properly digested*. The progress of the infant's teething, therefore, may lead to some information concerning the period at which he should be weaned.

THE progress of teething, however, is not always uniform. Some infants are sooner, and some are later in getting their teeth. But in general the front teeth begin to appear between the end of the fifth and the beginning of the eighth month; and about the twelfth or fourteenth month the infant has got all his front teeth, and the foremost or small grinders of both jaws.

It is now that the infant shows some power of mastication; it is now, therefore, we may infer that his stomach is capable of digesting new sorts of food; and it is now also we may infer that he may be very safely weaned.

* It is highly probable that the imperfect indigestion of some old people is partly owing to their want of teeth, and their consequent deficient power of masticating their food, and of mixing it with their saliva.

BUT the opinion has been held forth, that “ if a child is thriving, and gets a tolerable good supply of suck for three or four months, he will seldom suffer materially in his health by being weaned at that time ; so that, so circumstanced, there need never be any hesitation about weaning a child at that or any other early age, when any particular occasion requires it.”

THE “ occasion,” however, should be very “ particular” indeed ; for admit that the infant “ will seldom suffer materially ;” yet risk is implied ; and why run any risk when it can be done away ? when the infant can be supplied with the milk of another woman who is healthful, and whose infant is about the same age with himself* ?

* This is nearly the plan that a mother ought to follow who is unwilling to suckle her infant. For her own safety, as well as for the safety of her infant, she ought to suckle him for a certain period, and then give him gradually over to the suckling of another woman who was delivered about the same period with herself.

SHOULD any very " particular occasion" occur, therefore, to render it necessary to separate an infant from his mother, about the third, or even the fourth month, it will be far better to supply him with the milk of another woman, than to wean him at this early period ; for as yet he shows no power of mastication ; his digestive powers are unfit for the due assimilation of any other species of food, and therefore he runs every possible risk of suffering most " materially."

BUT while I contend that the third or fourth month is a period too early for weaning the infant, I would not argue the point or carry it to the extreme ; for although the teeth be destined to masticate the food, to mix it with the saliva, and to prepare it for the digestive process ; yet if he has been well nursed, if he be thriving, if the weaning process be properly conducted, and if his food be well chosen, he may surely be weaned without injury before he has really acquired the power of mastication. I have reasoned concerning the function of the teeth, and the mixture of the food with the

saliva, not so much to fix the exact or particular period of weaning the infant, as to put you on your guard against weaning him too early ; against weaning him, till, by the presence of a certain number of teeth, there is some reason to think that his digestive powers are capable of assimilating new sorts of food.

Now in what manner should the weaning process be conducted ? or with what sorts of food should the infant be supplied.

IT is the practice of some to wean the infant at once. A particular night is fixed for the occasion. On this night the spoon and the cradle are to be particularly at work ; and from this time henceforth he is not to taste his wonted food. Nay, soot or aloes, or some such horrid thing has been applied to the nipple to drive the infant from the breast, and to deprive him at once of the food to which he has been so long accustomed.

CAN the living body bear such treatment ? It will bear almost any thing when done gra-

dually ; but a change so sudden it will not bear. The most severe and formidable disease must ensue ; weaning-brash and all its direful consequences.

THIS disease you all know, and many of you know it from sad experience. It produces the most dreadful havock in the constitution ; it first deranges the bowels, and then the liver, and then the whole body ; it wastes the infant, and reduces him to skin and bone ; and it is only the most judicious and well directed treatment that can possibly save his life. The origin of the whole is weaning the infant too suddenly and too early.

THE remedy therefore is obvious. To prevent the whole, you have only to wean the infant gradually, and at a proper period. You are not to finish the weaning process in a night, nor in a day, nor in a week, nor even, perhaps, in a month. And when you do begin it, you are not to begin it too early. In taking this very important step, you have several things to consider. You have to consider the

season of the year, the state of the infant's health, the progress of his teething, &c.

You have next to make choice of his food. You have to consider that it is not his nature to live wholly either on animal or vegetable food, but that he ought to have a due proportion of both. You feed him with your own milk for the space of five or six months, or till he has got a pair of front teeth in each jaw. Then you accustom him to the use of other milk, and you learn him to feed by the spoon; then you begin the weaning process, and during this process, you bring him to a diet consisting of milk, veal-tea, chicken-broth, or weak beef-tea, with a due proportion of well prepared bread. You gradually increase the quantity of these substances, and you gradually decrease the quantity of your own milk. You wean him at last, and you bring him gradually to the use of food of a more solid nature, and to the common articles of diet, according to the progress of his teething, or according as the power of his mastication increases.

CONDUCTING the weaning process in this manner, the safety of your own constitution, as well as the constitution of the infant, is insured. The secretion of your milk gradually ceases; your change of constitution comes gradually on; Nature operates and supersedes the weak and imperfect interference of art, while the infant's health, and the due economy of his stomach and bowels is preserved. Weaning-brash, and all its direful consequences are only to be found among those infants who are crammed with improper food, and who are too early and too suddenly weaned.

IN the outset of this Discourse I told you that I would neither fear your offence, nor make terms with your prejudices; that I would lead you by the faithful, and unerring hand of Nature; and that, if I did not lose sight of her myself, I would not lead you astray. I hope I have not swerved from my principles. To have feared your offence, or made terms with your prejudices, would have been too common-place, and nothing less than crimi-

nal. And, if I have not led you by the unerring hand of Nature, it is because I have lost sight of her myself; and, should this appear, I shall most willingly submit to correction.

I AM aware, that the task I have undertaken, is a rash and a dangerous task. "It is an unpopular attempt to attack prejudices, established by time and habit, and secured by the corruptions of luxurious life. It is equally unpleasant to attempt the reformation of abuses, without the least prospect of success. Yet there is a secret pleasure in pleading the cause of humanity and helpless innocence *."

THESE are the sentiments of a man whose authority you must feel, and whose philanthropy you must revere; a philanthropy, which surmounted the fear of attacking prejudice, and which made him bold in the reformation of abuses; a philanthropy, which led him to plead the cause of humanity, and helpless innocence. Let me recommend his pleadings

* Comparative View.

to your most serious perusal ; let me also recommend “ Moss on the Management and Nursing of Children ; Buchan’s Advice to Mothers ;” as well as other works on the subject. Let such works hold a distinguished place in your libraries. They are most worthy of their room ; and they are neither beneath your notice, nor above your comprehension. Store your minds with the subject ; think for yourselves ; and be no longer the dupes of those, who make traffic of your prejudices.

It were well for mankind, that they knew something of the nature of their bodies, and of the nature and treatment of disease in general ; that they had some knowledge of what the profession can do, and what it cannot do ; of what ought to be done, and of what ought not to be done. With this knowledge, they would be greatly cautious of many things they do, and of many things to which they submit.

END OF THE FIRST DISCOURSE.

DISCOURSES
ON THE
MANAGEMENT OF INFANTS,
AND THE
TREATMENT OF THEIR DISEASES:

DISCOURSE II.

OF THE DISEASES OF INFANTS.

AWAKENED into some degree of active life, and gradually receiving an accession of new matter from the maternal system, the infant at length arrives at a certain degree of perfection in his organization, and is expelled from the womb. He is now able to exist by the exercise of his own functions, and to sustain the action of new and more powerful agents—of food, of air, of light, of temperature, &c.

WERE these powers duly applied to the body of the infant, he would enjoy uninterrupted health. But he is often subjected to their undue or disproportionate action, as well as to the action of other injurious powers. He therefore suffers pain, disease, and death.

REMARKS ON THE PREVENTION OF INFANTILE DISEASES.

IN my last Discourse, I admonished you to avert the operation of these causes, in order to preserve the life and the health of your infants; and, to impress you with the subject, I noticed, in general terms, some of their effects, or the diseases which they produce. I am now, however, to lay the scene more open to your view, by entering into a particular consideration of the causes, the symptoms, the nature, and the cure of infantile diseases; of those diseases which arise from unnatural or improper food, the undue operation of temperature, &c. in the following order:

- I. DISEASE of the stomach and bowels.
- II. DISEASE of the nose, lungs, and eyes.
- III. DISEASE of the skin.

FIRST,—I begin then with the diseased state of the infant's stomach and bowels, displayed by a retention of the meconium, sickness, vomiting, wind, gripes, diarrhœa or looseness, &c.

No sooner is the infant born, than his system undergoes a total revolution. The air rushes into his lungs; respiration begins; the circulation of his fluids is changed; those organs which were at rest are roused into action; his secretions commence; he is now ready to receive and assimilate a new species of nourishment.

For this purpose he is provided with a digestive apparatus, a long tube or canal, consisting of the mouth, the passage from the mouth into the stomach, the stomach itself, and the intestinal canal, which, in its many windings and turnings, reaches from the stomach to the anus.

THIS apparatus, however, is not sufficient for the digestion of the food; digestive fluids are also required. Accordingly, we find,—First, the saliva, secreted by glands in the neighbourhood of the mouth; Secondly, the gastric juice, emitted into the stomach from its internal surface, by exhaling arteries; and, Lastly, the bile and pancreatic juice, poured into the beginning of the intestines or bowels from the liver, and the organ called *pancreas*.

THE digestive apparatus is thus complete; the stomach and bowels, as vessels to contain the food; and the digestive fluids to cook or prepare it, as it were, for the purposes of the animal œconomy.

DURING the progress of the changes which the infant undergoes at birth, his food is preparing in your breasts. Guided by *instinct*, he searches for the breast, and he sucks the breast. In the act of sucking, the milk is mixed with the saliva in the mouth; thus

prepared, it is conveyed into the stomach, where it mixes with the gastric juice, which performs the first step of the digestive process; thence it is conveyed into the beginning of the bowels, where, by the action of the bile, and the pancreatic juice, this process is completed. It is now capable of being separated into two very distinct substances — the nutritious part, and the refuse or excrement. The former is absorbed, as it passes through that division of the bowels called the small intestines, by the mouths of a number of small vessels called lacteals, and ultimately conveyed into the blood of the infant, for the purposes of his growth and nourishment. The latter is conveyed into the large intestines, and ultimately discharged from the body.

Look back upon this subject, and view the different species of nourishment which Nature prepares for the infant, from the moment of conception till a considerable period after his birth. At the period of conception, see him

lodged in the womb, but unconnected with it, and nourished by a somewhat contained in the ovum; then see him connected with the internal surface of the womb, and receiving his nourishment from it; first, through the medium of flocculi, and then through the medium of the placenta; now see him separated from the womb, yet still to be nourished by your fluids, by the milk of your breasts.

FROM the very moment of conception, therefore, the infant receives an accession of nourishment, by which his structure is gradually unfolded. But are we to suppose that this nourishment is always the same? No: it is probably of one kind in the ovum, of another kind when conveyed by the flocculi; and of a third when conveyed by the placenta. In short, it is probable that it rises, both in its nutritive and active qualities, with the progress of the infant's organization and increasing powers.

DISPUTES there may be, however, about the manner in which the infant is nourished in the womb, and about the nature of his nourishment—whether it be assimilated by your functions, by the placenta, or by the functions of the infant himself? But about this there can be no dispute,—that it is derived from your fluids, and that it is exactly suited in its nature to the state and condition of the infant.

AT length he is qualified to live by the exercise of his own functions, but still in need of a nutriment derived from your fluids,—a nutriment different from any he has hitherto received, yet exactly suited to the nature of his digestive fluids, entering into new combinations by their action, and affording a nutrition well ordered for the purposes of his œconomy.

Now, whatever may be the mode in which he is nourished in the womb, and whatever may be the real nature of his nourishment, you

may rest assured, that, were it in the power of art to change it, the death of the infant would infallibly ensue. Here, however, it is impossible that art can interpose. It is only after his birth that he is subjected to the whims of art, to unnatural and improper food, to food abhorrent to the nature of his œconomy, and to the nature and powers of his digestive fluids,—to food which they cannot assimilate or digest. Thus he suffers severe disease—first, in his stomach and bowels, and then throughout his whole frame.—He suffers death.

BE it my business, therefore, to inquire into this disease; but, first, with regard to that disease displayed by a retention of the meconium.

You are already introduced to this subject. You know that this meconium, this blackish sort of matter, is natural to the bowels; that it is produced in the œconomy of the infant previous to birth; that it is necessary to his

œconomy, or rather is a necessary effect of his œconomy; that it is designed to remain in his bowels till birth; and that, in a certain period after birth, it is destined to be expelled.

You know that these are plain and simple matters of fact, and facts entirely consistent with the institutions and operations of Nature in the infantile œconomy. If the infant be properly managed; if he be not thrown into the state of disease; if the changes which take place in his body and in his bowels be not interrupted or disturbed; assuredly, and most assuredly, the meconium will be discharged; for the one is a consequence of the other. The discharge of the meconium is a necessary effect of the changes which take place in the infant's body at birth; of the digestive fluids being poured into his stomach and bowels; of these organs being roused into action; and it could as soon cease to take place, as these changes themselves, or the dis-

charge of the urine, or any other discharge, provided the infant be properly managed, and preserved in the healthful state.

WHEN, therefore, the meconium is retained, it is an *effect*, and not a cause of disease.

OTHERS, however, have regarded the retention of this substance as a *cause* of disease. It “will sometimes firmly adhere to the coats of the bowels,” says one writer, “and remain for many days unaffected, even by *powerful* medicines; sometimes occasioning dangerous complaints from the birth, and, at others, giving rise to more *remote evils*.” Again, “if it be not soon carried off, it will not only change the quality of the milk, or other food, as it descends into the bowels, but itself also becomes highly acrid (the greater part of it being bile), and cannot fail to produce indigestion, flatulency, pain, purging, or costiveness, and other *similar evils*; and the meconium is further disposed to this acrid state on

another account: *viz.* from the admixture of atmospheric air. Whilst the infant remains inclosed in the womb, it is secured from all contact of air; and therefore the *alimentary* contents remain harmless and bland, though increasing for many months*.” “The black and viscid substance, called meconium,” says another writer, “is usually expelled from the bowels a few hours after the child has been put to the breast, if he be suckled by his own mother. But sometimes it is so *tenacious*, that it adheres to the intestines, and cannot be thrown off; and sometimes the milk is not sufficiently *active* for that purpose†.” “An accumulation of the meconium, or bile,” says a third, “in a highly animalised state, precedes birth; and,

* Underwood, on the Diseases of Children.

† A Treatise on the Management of Female Complaints, and of Children in early Infancy, by Alexander Hamilton, M. D. *Revised and enlarged by Dr. James Hamilton, Professor of Midwifery in the University of Edinburgh, &c.*

BEHOLD the infant born, therefore, with a poison in his bowels, about to corrupt his food, to produce disease, and to destroy him !

FOR Nature makes strange mistakes : at one time, she makes the meconium of the infant's bowels *pitchy, and so tenacious, that it adheres to the intestines, and cannot be thrown off* ; albeit, " the milk is sometimes not sufficiently *active* for that purpose !!! " At another time, it " becomes highly acrid, and cannot fail to produce indigestion, flatulency, pain, purging ; " yea, " or costiveness, and other *similar evils* ; " " and then it proves, by its irritation, the source of much pain, griping, and uneasiness—rendering the child, in the highest degree fretful, and inclining to cry."—For why ? Because Nature commits more mistakes—keeping " the infant secured from all contact of air, whilst " he " remains inclosed in the womb ; " but forming his anus in such a manner, that it admits " the admixture of atmospheric air "

after his release, whereby “the meconium is further disposed to this acrid state!”

If Nature does these things, who can help it? But who has proved that Nature makes such egregious blunders? that the infant is either born with a *pitchy*, a *viscid*, a *clammy*, or a *tenacious meconium*; or that it becomes *acrid* after his birth—corrupting his food, producing “indigestion*,” and causing disease? No one whatever. The whole is *conjecture*, and the poorest of all conjecture, inasmuch as it arraigns the institutions of Nature, and makes her very establishments the causes of the infant’s destruction.

* The meconium can have no interference with the digestion of the food, because it is lodged in the lower part of the bowels, or the large intestines; whereas, the food is in the stomach, and the small intestines, where it undergoes the digestive process: it is digested, therefore, ere it reaches the meconium; and its release, or fecal part, is ready to be discharged from the bowels.

To enter into a formal refutation, therefore, of this mode of explaining the retention of the meconium, would be absurd. Let Nature speak for herself, while I observe that its retention is an effect or a symptom of disease; the immediate effect of a torpid or inactive state of the bowels;—for, were they in the healthful and active state, they would duly discharge it according to Nature's appointment.

Be cautious, then, in the reception of such doctrines. Pause a moment, and ask a few questions. Whence comes this meconium? How is it produced? And what is its real nature? What changes can it undergo? Does it become *pitchy, viscid, clammy, or tenacious* previous to, or after, the infant's birth? What are the causes which produce these changes upon it? and how or in what manner do they operate? Is it a thing certain, “that it adheres to the intestines,” or “to the coats of the bowels, sometimes occasioning dangerous complaints, and at others giving rise to more *remote*

evils?" And are you sure that it "also becomes highly *acrid*, and cannot fail to produce indigestion, flatulency, pain, purging, or costiveness, and other *similar evils?*" Do you know any thing or nothing of these things? or do you know so much as either to found a theory, or lay down a bold and decided practice?

ATTEND, therefore, to the other side of the question. View the infant from his birth, till the moment he begins to complain; till the meconium seems to be retained. Look into the mode of his management: see whether he has been treated consistently with the laws and institutions of Nature; or if he has undergone the common ordeal of infantile treatment; the washing and dressing processes, the tossing and tumbling about, and the screaming and crying during the whole of these operations, without being allowed to rest till the changes of his birth be fully established, exposed to cold, *physicked* and fed, &c. If he has undergone this ordeal,

wonder not at his deranged and debilitated body, his pale and livid lips, the death-like colour of his skin, the paleness and sinking of his face, his *indigestion*, his *flatulency*, his *pain*, his *purging*, his *costiveness*, or the retention of his meconium, or any thing else.

Thus, the very means employed to discharge the meconium, are sometimes the causes of its retention. “The child was born (says Dr. Underwood) of very healthy parents, (*not at all of constipated habits*) after a quick and comparatively easy labour, and appeared to be itself in good health. To avoid prolixity, I shall only briefly observe, that the child took a little *rhubarb* an hour or two after it was born; but, having had no stool when I saw it the next day, I ordered a clyster to be thrown up. In the evening, the child became drowsy and insensible; and, when roused, it moaned, but seemed unable to cry. It continued pretty much in this state (except that at times it appeared to be

in great pain, and was evidently convulsed) for six days; and was nourished chiefly by breast-milk, given by tea-spoonsfull, seldom reviving sufficiently to suck.

“ It had no stools, but such as made only a few spots on the cloths, about the size of a shilling, till the sixth day; and then they were very small, hard, and lumpy. The next day it had more of this kind; and had not, till the eighth day, any thing like a proper stool, which was also mixed with hard lumps; but, on the eleventh day, they were thinner; and, on the thirteenth, came very freely.—In the course of six-and-thirty hours, *I prescribed two ounces of the common infusion of senna, two drams of rochelle salts, four grains of jalap, and a grain of calomel; besides purging clysters, and the use of the warm bath.* The next day, the child took *four grains of ipecacuanha*, at two doses, and *forty drops of vinum antimonii*, at four times (in the course of an hour) without any effect; and, at another

period, *six drams of castor oil*, besides several doses of manna. Three days after the child had got rid of the meconium, the thrush made its appearance; which was slight, but continued above three weeks*."

THIS is a most instructive, and, throughout, a most remarkable case. But, to avoid prolixity, as its author says, I shall briefly observe, that the *little rhubarb* was the primary cause of all the mischief.—And how otherwise?—"The child appeared to be in good health;" and we do not learn that any other cause of disease had operated upon it. About "an hour or two after it was born," it took a dose of *rhubarb!!!*—the most nauseous, sickening, and depressing drug, perhaps, of the whole *Materia Medica*. It "had no stool next day," as might have been expected. "In the evening, the child became drowsy and insensible; and, when roused, it moaned, but seemed unable to

* Underwood's Diseases of Children.

cry." It was poisoned (so to speak): the excitability of its stomach and bowels was almost destroyed—they were in the most torpid state, and could scarcely be roused into action by the most enormous quantity of cathartic drugs. "Three days after the child had gotten rid of the meconium, the thrush made its appearance, which was slight, but continued above three weeks;" and no wonder.

"Or all the absurdities that prevail in the treatment of infants, there is none so grossly repugnant to common sense, as the frenzy of giving them physic before we give them food. They scarcely begin to breathe, when some purgative slop is forced down their throats; and the tender stomach and bowels are thrown into a state of the most unnatural irritation;" and sometimes they are rendered torpid and insensible. "It often appeared to me very strange, how people came to think that the first thing given to a child should be drugs; but, after duly considering the matter, I perceived

it to be the effect of superficial knowledge. The more I examined this point, the more I was struck with the truth of the philosopher's remark :—*that mere ignorance hath never done any material injury ; that error alone is destructive ; and that we do not err in things we are professedly ignorant of, but in those which we conceive we know.* To begin with medicines at the birth, is a strong illustration of the mischief of conceited skill.

“ IT would never enter into the minds of persons wholly unacquainted with medical science, that evacuations ought to precede the first supplies of nourishment. But a little smattering of physic gave rise to the idea of cleansing the first passages as soon as possible, in order to bring away the black, viscid, syrup-like substance, contained in the intestines of a new-born infant. The fallacy of such a suggestion can only appear upon a more accurate and comprehensive view of the subject.

“ In the first place, the *meconium*, as it is called, generally passes, soon after the birth, without any excitement but the mere effort of Nature. When this does not take place, every desirable purpose is sure to be effected by the thin, waterish, and purgative quality of the mother's milk. Do you suppose that any chemical process can equal this? Or, do you imagine that the retention of the *meconium*, for a few hours, can do half as much mischief as your oils and your syrups, your indigestible, or your acrimonious trash, must occasion? But it was enough for midwives and nurses to hear physicians, who knew very little more of the matter than themselves, prescribing things of an opening nature, to purge off the remains of the *meconium*. This acquisition of imaginary science was too flattering to female vanity, not to be displayed upon every occasion; and many a severe twinge have poor infants suffered, from a midwife's desire to shew her profound skill in physic.

“ I WAS once sent for by an intimate friend, to look at a new-born infant, who appeared to be in great agony. I soon discovered that the complaint was the belly-ache, caused by some injudicious purgative. As the midwife was present, I remonstrated with her on the rashness of thus tampering with an infant's delicate constitution. She replied in a tone of self-sufficiency and surprise, “ Good God ! ” Doctor, I only gave the proper physic to bring away the *æconomy*.” I should have smiled at her affectation of medical cant, and her ridiculous attempt to catch at the sound of the word *meconium*, had not the serious mischief she had done suppressed every emotion of laughter. I reprimanded her in very pointed terms, and made her feel the burning blushes of confusion, when I shewed that poison was as likely to be used for physic, as *æconomy* for the word *mecconium*, from the same impulse of conceited folly.

“ BUT the whole blame, in such cases, is not, as I have already intimated, to be laid to

the charge of midwives and nurses: the faculty themselves have paid too little attention to the medical treatment of children; and, in consequence of their superficial knowledge of these important subjects, have sanctioned errors of the most fatal tendency. I once heard a medical professor of great celebrity say, that he had met with a case where the *meconium* was not brought away for three months after the child's birth, and then only by means of strong drastic purges. Though one of the first anatomists in Europe, he was led into this mistake by the blackish colour of the child's stools; which, for want of practical observation and experience, he could not account for, but by ascribing it to the supposed remains of the *meconium*. "There is nothing so absurd," says an ancient writer, "which has not been uttered by some philosopher." I am sorry to add, that a similar assertion might be made, with still greater truth concerning the professors of physic*."

* See Buchan's Advice to Mothers, which I seriously advise you to peruse.

I BESEECH you, consider these things, and lay them to heart. The poison and the antidote is before you. Treat the infant according to the institutions of Nature; and be assured, that his meconium will be discharged. But, should it be retained, lay it not to the door of Nature, nor to any thing about the tenacity or viscosity of the *meconium* itself, but to general disease. Look into the mode, therefore, in which the infant has been managed. Do away the hurtful operation of temperature, of physic, and of food, and every thing else. Lay him to rest; keep him moderately warm; supply him with his natural food, your own milk; foment his bowels, perhaps, with a warm emolient injection. In this manner, assist the efforts and operations of Nature, which are working at the same time, for the infant's safety and recovery—for the restoration of his general health, and of the energies and functions of his stomach and bowels. Beware, therefore, of the engines of medicine, lest the remedies turn

out to be worse than the disease—lest you induce a disease more terrible in its nature, and more dangerous in its tendency, than the one you would remove.

I now proceed to consider those diseased conditions of the infant's stomach and bowels, which are displayed by sickness, vomiting, wind, gripes, looseness, &c.

You have already seen, that, from the moment of conception, the infant is supplied with a nutriment exactly suited to his state and condition; that it is of one kind in the ovum, of another when conveyed by the flocculi, and of a third when conveyed by the placenta; in short, that it probably rises, both in its nutritive and active qualities, with the progress of the infant's organization and increasing powers.

WHAT, then, are we to make of your milk? Are we not bound to believe that it is his destined food after his birth; that it is exactly

fitted to his state and condition, to the functions of his stomach and bowels, and to the powers of his digestive fluids; and that, as a change of his nutriment in the womb would have proved his destruction, so also would a change of your milk?

THIS is a fundamental doctrine, and not to be easily overturned; for, surely, it will not be contended that the institutions of Nature can be infringed with impunity. “Whatever forms may, by artifice, be intruded upon her, and she compelled to assume, to enlarge, or contract, her bias and inclination, she can never be made eventually to deviate, without manifest injury to herself, from the station and bounds unalterably impressed upon her by the unerring Power which first created, and gave her laws*.”

THE most obvious facts prove, that, in your milk, Nature has provided a species of nutri-

* Moss.

ment proper for the infant, and that the use of any other is a manifest deviation from her laws. Why has Nature provided the whole class of *mammalia* with proper glands for the secretion of this fluid? Why does instinct teach their young to search for the part by which it is produced, and, by a vigorous muscular exertion, to extract it, if the milk be not designed for their sole support, during a certain period after their expulsion from the womb? Unsophisticated Nature never deviates from her established laws. Among all the inferior orders of animals, we see no deviation from Nature's plan. It is by the false refinements of man, that other species of aliment have been employed in the early period of infancy. It is only the offspring of man, and of those animals under his direction, that are injured in this point, by wandering from the plain dictates of Nature.

BUT, strange to tell, the natural food of the infant has been reckoned the principal source of all his diseases. It has been supposed that

your milk is a chylous fluid ; that it is readily affected or changed by the kind of food which you employ ; that it is coagulable by acids, ardent spirits, &c. ; that it is coagulated in the stomach of the infant ; that it is peculiarly disposed to pass into an acescent or acid state ; and that, by this disposition towards acidity and coagulation, aided by a prevailing acidity in the stomach and bowels of the infant, arising from a peculiar delicacy or atony in his frame, the greater number of his diseases are produced. Thus, if such doctrines be true, the infant receives his diseases, and his death, from the very hand of Nature herself!!!

ARE such absurdities worthy of any serious attention? Yes ; they have imbued you with a number of prejudices ; they stand in books which may still fall into your hands ; they contaminate the pathology, and lead astray from the true causes of infantile diseases ; and they continue a practice which is as absurd as it is injurious.

I would, therefore, attempt a refutation of these doctrines; and, for this purpose, I would first direct your attention to the nature of milk.

THE milk of one animal has certain peculiarities which distinguish it from that of another. But we are best acquainted with the milk of the cow. Attend, therefore, to its general analysis, and then to the differences which exist between it and the milk of other animals.

FRESH milk is an opaque fluid, of a white colour, a slight peculiar smell, a pleasant sweetish taste; of a greater consistence than water, and is slightly unctuous.

WHEN allowed to remain at rest, a thick unctuous yellow-coloured substance collects upon its surface, known by the name of cream; the oily part of which, by agitation, or *churning*, is formed into butter.

AFTER the cream is separated, the milk which remains, is much thinner than before, and has a bluish white colour. If it be heated from ninety-six to a hundred degrees, and a little *rennet*, which is water digested with the inner coat of a calf's stomach, preserved with salt, be poured into it, coagulation ensues ; and, if the coagulum be broken, the milk very soon separates into two substances,—a solid white part, called *curd*, and a fluid part, called *whey*. The curd may be formed into cheese ; and the whey is composed of water, jelly, sugar of milk, and certain salts.

Thus, you see that milk may be separated into three parts ; namely, *cream*, *curd*, and *whey*.

If milk be kept for some time, it acquires a very different taste from that which it had when drawn from the cow. Owing to the formation of a peculiar acid in the whey, it becomes sour ; for neither curd nor cream,

perfectly freed from the whey, seem susceptible of acquiring acid properties. Hence it is that milk, after it becomes sour, always coagulates, as all acids produce this effect upon it. The boiling of milk, however, retards the formation of its acid, and consequently it continues longer sweet, but it runs sooner into the state of putrefaction.

BESIDES the putrefactive process, milk is also susceptible of the acetous and vinous fermentations, by which vinegar and a spirituous liquor are produced.

So much for the milk of the cow; and the milk of all other animals, as far as it has hitherto been examined, consists nearly of the same ingredients; but there is a very great difference in their proportion.

YOUR milk has a much sweeter taste than cows' milk. When allowed to remain at rest for a sufficient time, a cream gathers on its

surface. This cream is more abundant than in cows' milk, and its colour is usually much whiter. After it is separated, the milk is exceedingly thin, and has the appearance rather of whey, with a bluish white colour, than of creamed milk.

NONE of the methods by which cows' milk is coagulated succeed in producing the coagulation of your milk. It is certain, however, that it contains curd; for, if it be boiled, pellicles form on its surface, which have all the properties of curd. Its not coagulating, therefore, must be attributed to the great quantity of water with which the curd is diluted.

THOUGH the cream be churned ever so long, no butter can be obtained from it; but if, after being agitated for some hours, it be allowed to remain at rest for a day or two, it separates into two parts—a fluid, which occupies the inferior part of the vessel, pellucid, and colour-

less, like water—and a thick, white, unctuous fluid, which swims on the surface. The lowermost fluid contains sugar of milk, and some curd; the uppermost does not differ from cream, except in consistence. The oily part of the cream then cannot be separated, by agitation, from the curd.

WHEN this milk, after the curd is separated from it, is slowly evaporated, it yields crystals of sugar of milk, and of a certain salt. The quantity of sugar is rather greater than in cows' milk.

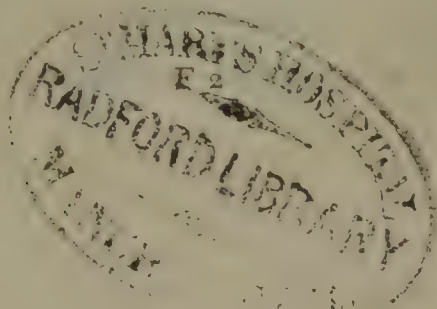
THUS it appears, that your milk differs from that of the cow in three particulars :

1. IT contains a much smaller quantity of curd.
2. ITS oil is so intimately combined with its curd, that it does not yield butter.
3. IT contains rather more sugar of milk.

BUT there is one fact to which I would call your particular attention;—the quantity of curd increases in proportion to the time after your delivery. Nearly the same thing has been observed with respect to cows' milk.

ASSES' milk has a very strong resemblance to human milk. It has nearly the same colour, smell, and consistence. When left at rest for a sufficient time, a cream forms upon its surface, but by no means in such abundance as in your milk. This cream, by very long agitation, yields a butter, which is always soft, white, and tasteless. Creamed asses' milk is thin, and has an agreeable sweetish taste. Spirits and acids separate from it a little curd, which has but a small degree of consistence. The whey contains sugar of milk, and a certain salt.

ASSES' milk, therefore, differs from cows' milk in three particulars :



1. Its cream is less abundant, and more insipid.
2. It contains less curd.
3. It contains more sugar of milk.

GOATS' milk, if we except its consistence, which is greater, does not differ much from cows' milk. Like that milk, it throws up abundance of cream, from which butter is easily obtained. The creamed milk coagulates just as cows' milk, and yields a greater quantity of curd. Its whey contains sugar of milk, and two salts.

EWES' milk resembles almost precisely that of the cow. Its cream is rather more abundant, and yields a butter which never acquires the consistence of that from cows' milk. Its curd has a fat and viscid appearance, and is not, without difficulty, made to assume the consistence of the curd of cows' milk.

MARES' milk is thinner than that of the cow, but scarcely so thin as your milk. Its cream cannot be converted into butter by agitation.

The creamed milk coagulates precisely as cows' milk, but the curd is not so abundant. The whey contains sugar of milk, and two salts*.

SUCH is the general analysis of milk. Its ingredients are cream, curd, whey, sugar of milk, and certain salts, existing, generally speaking, in different proportions in the milk of different animals.

It is true, however, that, from this analysis, we do not obtain any decided information concerning its fitness for the nutrition of the infantile animal. But it is indisputable, that Nature has formed it for this, and no other purpose; and therefore we must conclude that its ingredients are proportioned to the digestive powers of the young of every animal—the milk of the cow, to the digestive powers of the calf—your milk, to the digestive powers of the infant,—and so of the rest, to the meanest animal.

* Thomson's Chemistry.

who suckles her young. *O Lord, how manifold are thy works! in wisdom hast thou made them all.*

Will man then, vain, ignorant, presumptuous man, dare to arraign thy works? Will he presume to say that Nature has formed the milk of her noblest production unsuitable to the digestive powers of her offspring, and that it is the principal source of all their diseases? But let us examine the grounds on which such presumptions are founded.

IN the first place, it is supposed that your milk is a chylous fluid, and that it is readily affected by the kind of food which you employ.

THE food is first conveyed into the stomach, where it acquires new and very different properties. It is converted into a soft, pap-like substance, which has been called *chyme*.

THE chyme, thus formed, passes into the bowels, where it is subjected to a new process,

being gradually decomposed, and converted into nutritious and excrementitious matter. The latter is evacuated, and the former absorbed, and finally conveyed to the blood-vessels, and, by the influence of the air in the process of respiration, is converted into blood, for the different purposes of the animal œconomy.

FROM the difficulty, however, of collecting the chyle in any considerable quantity, it has never been accurately analysed, and therefore its real nature is not well understood. It is said, indeed, to have a general resemblance to milk, containing cream-like globules, a part capable of coagulation, a serum, different salts, and a substance scarcely differing from the sugar of milk. But it is also observed, that the coagulable part is semi-transparent, slightly red, and does not resemble the curd of milk; hence there is a difference between milk and chyle.

BUT, admitting that your milk is a chylous fluid, how can any one pretend to say that it

readily undergoes a hurtful change, by the kind of food which you may employ? In order to establish this point, it would be necessary to know the real nature of chyle, and the changes to which it is liable; for if your milk be really a chylous fluid, the changes which take place in it must be exactly analogous to the changes which the chyle undergoes by the use of different sorts of food.

But the question is, Does the use of different sorts of food produce any change in the chyle? "All the substances employed for food," says an eminent writer, "have all, and every one of them, the same elements exactly, and each of them all the elements necessary for the formation of chyle; that is, all the elements that are actually found in chyle: that, therefore, it is only necessary that these elements should be separated from one another, and re-combined, in order for its formation; that the action of the stomach, and part of the bowels, together with the digestive fluids, induce, in the matter

employed for food, one operation, by which its elements are disunited, and re-united in a new manner, and into a new matter ; which matter, although it may be mixed with other substances, is in itself always the same in all its properties ; and that this matter is, by a new operation, induced, by the action of the duodenum, and the fluids there, to have its elements again disunited, and re-united so as to form the three essential parts of the chyle, which, therefore, cannot be influenced, in the smallest degree, by the food ; and that these three essential parts of the chyle are always the same."*

If this doctrine be true then,—if chyle be always the same, whether formed from animal or vegetable substances ; and if your milk be a chylous fluid,—it follows, that the doctrine of its being readily affected, or undergoing a hurtful change by the kind of aliment which you employ, falls to the ground.

* Fördyce, on Digestion.

IN the second place, it is asserted, that your milk is coagulable, by acids, ardent spirits, &c. and that it is coagulated in the stomach of the infant. The latter assertion is true, and the former false. None of the methods by which other milk is coagulated succeed in producing the coagulation of your milk. Yet it is certain, as you have seen, that it contains curd; and it is almost equally certain that it is coagulated in the stomach of the infant, for an infusion of the infantile stomach coagulates cows' milk. Nay, there is every reason to conclude, that the coagulation or decomposition of the milk in the infantile stomach is the first step of the digestive process.

THIRDLY, it is presumed that your milk is peculiarly disposed to pass into an acescent or acid state. We have experiments, however, both for and against this presumption. "Whoever takes the trouble," says one experimenter, "of attentively comparing human milk with that of the ruminant animals, will soon find it

to be much less prone to run into the acescent or acid process. I have very often exposed equal quantities of human and cows' milk in degrees of temperature, varying from the common summer heat, or sixty-five to one hundred, and I have constantly found that cows' milk acquires a greater degree of acidity in thirty-six hours, than the human did in many days. Cows' milk becomes offensively putrid in four or five days—a change which healthy human milk, exposed in the same manner, will not undergo in many weeks—nay, sometimes, in many months. I once kept a few ounces of a nurse's milk, delivered about six or seven days, for more than two years, in a bottle moderately corked. It stood on my chimney-piece, and was frequently opened to be examined. At the end of this period it shewed evident marks of moderate acidity, whether examined by the taste, smell, or paper stained by vegetable blues or purples—the latter it changed to a florid red colour; whereas cows' milk, kept a few days, changed the colour of the same paper

to a green, thereby clearly shewing its putrescent tendency." Nay, our experimenter is so strong upon the point, that he adds,—“ Perhaps another instance could not be adduced of an animal fluid resisting so powerfully the changes produced on most bodies by fermentation.” He then puts the following question: “ If we find *human milk* out of the body so very slow in running into an acescent state, does it not afford strong presumptive evidence, that the milk of nurses cannot be so very prone to run into acidity in the stomachs of infants, as authors endeavour to persuade us?”*

“ To this, it may be replied,” says another experimenter, “ that though human milk, out of the body, does not indeed run into an acescent state so soon as cows’ milk does (and, for the full establishment of this fact, we are much indebted to Dr. Clarke), yet, I think, that *experience* (which must be allowed to be

* Dr. Clarke on *Human Milk*.—Transactions of the Royal Irish Academy.

full as good evidence as any *experiments* can be) as fully demonstrates, that, like many other milks, and most vegetables, it is much more disposed to occasion acidity in the stomach, than food prepared from pure animal juices. Moreover, it is not usually so slow in acquiring an evident acidity, even out of the body, as might be conceived, from some experiments Dr. Clarke has industriously made, and, I doubt not, as fairly reported; for, at the end of four days, and even sooner, I have sometimes met with it full as sour to the taste as cows' milk kept the same length of time, though this is not usually the case; and, when become putrid (by that test) which I have known it to be in ten days, it has been equally so with cows' milk." And this experimenter adds, in a note, "that so far from *human milk* being *usually* indisposed to be much changed by long keeping, as Dr. Clarke has observed, it has not only always become putrid before I have thrown it away, but that about three quarters of a pint which I kept (in a bason) at the hospital, only a fort-

night, for the purpose of collecting the curd by a spontaneous separation, had rendered the room, for more than a week, sensibly offensive to every one who entered it ; but was so very fœtid, when I strained it off, that the matron who assisted me, being less accustomed to putrid effluvia than I have been, was disgusted by it exceedingly." *

Now, which of these experimenters are we to believe? Be this as it may, we have a bright sample of medical experiments.

BUT this disposition towards acidity and coagulation in your milk is not enough : it is also thought necessary to give the infant a general *atony* or weakness of constitution, together with a *prevailing* acidity in his stomach and bowels, to account for the disorders of these parts.

" MANKIND, during infancy," says the last quoted experimenter, " is certainly amongst the most feeble of all animals that are nou-

* Underwood, on the Diseases of Children.

rished in the like mode by the parent, and is liable to more complaints, especially to disorders of the alimentary canal. It is reasonable, therefore, to conceive, that his aliment should be of the most easy digestion—light, thin, and very *nutritious*—at once affording as little labour to the stomach as possible, and easily convertible into chyle or blood. We accordingly find *human milk*, though very thin, exceedingly *nutritious*, owing to the great proportion of the fat or buttery part, and of a saccharine whey, with which it abounds. It is also easier of digestion than most other milks, owing to the smaller quantity of curd it contains; which, while it is less *nutritious* than the other parts, is also much more difficultly digested, or converted into chyle.

“ The atony of infants, therefore, whilst it is a pre-disponent cause, proves likewise an occasion of the severity of their complaints, and of the great fatality attending them; and this fatality arises from disorders of the sto-

mach and alimentary canal : for how very few infants die in the first months, in whom these parts are not, both at *first and last*, the evident seats of the disease ; and with what difficulty are many others preserved from similar complaints, especially children brought *up by hand*?—since the like stubborn things (which are met with every day in the treatment of infants) cannot be accounted for but in the way I have all along done ; and must evidently demonstrate the existence of an *acid* in the first passages of infants, of what *nature* soever the food may be on which they are supported.”

Now, were I to carry you through the whole history of medical science, though full of “ stark nonsense,” as a certain writer expresses it, I could not introduce you to a piece of greater folly and extravagance, or more downright nonsense, than this explanation of the diseases of early infancy. In the first place, your milk is made a “ chylous fluid ;”—for what purpose?—To insinuate that it is readily

affected, or undergoes changes injurious to the infant, by the kind of food which you employ. But what sort of food do you employ, by which it is thus contaminated? Have you not nourished the infant in the womb by your fluids, innoxious, under the same sort of food? How now then do they undergo a noxious change? But who has an infant more thriving than the poor man's wife? Yet this woman suckles her infant under a poor and meagre diet—a diet seemingly ill-qualified to afford either a wholesome chyle, or a nutritious or salutary milk — under many turmoils and many hardships—nay, sometimes, under pale and meagre disease ;—yet even here her infant receives no injury. She perseveres in her appointed task ; and the protecting hand of Nature watches over both her and her infant. Ever careful of the preservation of her works, Nature determines that the fountain of the infant's existence shall neither be dried up nor contaminated to his hurt ; and that the health of the fostering mother shall soon be restored.

How passing strange, that man, without any real knowledge of his subject,—any real knowledge either of the digestive process, or of the formation or nature of chyle, or of the secretion or real nature of milk—*ignorant* also of the substances from which it is secreted—*conjecturing* whether it be derived from lymph or chyle, or blood—in short, *conjecturing* every thing,—should at once draw a conclusion in the very face of Nature herself, and, by his foolish fiat, set the whole order, harmony, and wisdom of her establishments at nought!! But she laugheth him to scorn, and holds him in the highest derision.

YET have we two sets of experiments—the one to prove the fitness, and the other the unfitness, of your milk for the infant. But was there ever any thing like this? Has Nature left this matter to be determined by experiment? Or is she not here the *Alpha* and the *Omega* of all reasoning, and all experiment? That your milk is a food fit and proper for the infant, is

a point as obvious to the illiterate peasant, as the most enlightened philosopher; for Nature herself has said it. All experiments to prove it, therefore, are vain; and the experiments of him, who would attempt to prove that it is injurious to the infant, are worse than foolish.

To follow our last experimenter, therefore, through all his reveries concerning the coagulations and ascencencies of your milk without and within the infant's stomach, or to attempt a refutation of his arraignments of Nature, in regard to the constitution of the infant himself, would be equally irksome and unavailing. Let us rather endeavour to ascertain the true causes of the disorders of which we are speaking, as the best mode of refuting such idle opinions.

THAT Nature operates as uniformly, and as universally, in the animal œconomy, as in any department of the material world, is a position which surely no one will dispute. Reasoning

from this fundamental principle, it must be admitted that the infant, when he comes from the hand of Nature, is perfect as an infant; and that, though he were “the most feeble of all animals nourished in the like mode by the parent,” yet still, in his œconomy, every thing is mutually agreeable, and every thing fitted to perform the office it is destined to perform. “It is reasonable, therefore, to conceive, that his aliment should be of the most easy digestion—light, thin, and very *nutritious*—at once affording as little labour to the stomach as possible, and easily convertible into chyle or blood.” Accordingly, we find that Nature has actually provided an aliment of this very description.

BUT what has Nature done else? What she has done with the one hand, she has destroyed with the other. She has done such things as “*evidently demonstrate* the existence of an *acid* in the first passages of infants, of what *nature* soever the food may be on which they

are supported." Monstrous absurdity!!! Yet are we told that this acid "proves an occasion of the severity of their complaints, and of the great fatality attending them; and this fatality arises from disorders of the stomach and alimentary canal; for how very few infants die in the first months, in whom these parts are not, both at *first and last*, the evident seat of the disease? and with what difficulty are many others preserved from similar complaints, especially children brought *up by hand*?"

TRUE, indeed! few infants die in the first months, in whom these parts are not, both at *first and last*, the evident seat of the disease. It begins with their birth, with the first dose of their physic—it ends with their death; or should they, perchance, escape with life, how often does it end in a highly-deranged constitution, and in the supervention of many other diseases? In short, disease in their stomach and bowels is the great and primary source of all their diseases and all their sufferings.

BUT, to enter into the spirit of this subject, you must know something more of the œconomy of the stomach, or the digestive process.

ON this point various opinions have been entertained. The changes which the food undergoes in the adult stomach have been ascribed to mechanical action. The stomach is, therefore, a grinding machine; and, while it grinds, it mixes and mollifies the food by agitation. Experiment, however, disclaims the doctrine; for various kinds of food have been inclosed in perforated metallic tubes and balls: these have been swallowed; and, on being discharged, the food has been found completely dissolved. In fact, the food undergoes a change in the stomach, which no mechanical action can produce or explain. Were digestion a mechanical process, it might be affected by the pestle and mortar.

AGAIN, the change which the food undergoes in the stomach has been ascribed to *fermen-*

tation. Thus is the stomach a wine-vat, or a vinegar-tub, or a sink of putrefying materials. To effect digestion, therefore, it were only necessary to reduce the food into a soft mass or pulp, and to place it in a temperature equal to that of the stomach. In vain, however, should we look for those peculiar changes which the food so readily and rapidly undergoes by the digestive process. Ere the fermentative process had begun in our artificial mass, the same materials would be long digested; nay, bones would be dissolved in the stomach. The digestion of the food, therefore, can neither be ascribed exclusively to fermentation, nor to mechanical action.

THE food is scarcely lodged in the stomach, till its changes commence. It is reduced into a pulp; its bulk is diminished; it undergoes changes in its composition; its taste and smell, and all its former properties, are destroyed; it becomes a new and very different substance. These changes are produced by a particular

liquor, secreted by the stomach, and is therefore called the *gastric* or *stomachic juice*.

THIS gastric juice, however, is not the same in all animals. In one animal it can only digest vegetables; in another, animal food. The stomach of the goat can digest hemlock; but to man it is a poison. Yet the gastric juice of man, generally speaking, can digest both animal and vegetable substances.

BUT it can only digest them in a certain proportion. How often is the gluttonous and intemperate man obliged to disgorge what his gastric juice cannot digest? This is a law of the stomach, of great importance in medical practice; yet has it never had any attention. Whenever the stomach is overloaded, or whenever it meets with a substance it cannot digest, it will unburden itself in one way or another, provided its energies have not been overpowered.

AGAIN, the gastric juice will only digest the food in regular order, when healthfully secreted. Gluttony and intemperance, poisonous drugs, and many other causes employed in civilised and corrupt society, derange the stomach, impair the secretion of the gastric juice in quantity, and deprave it in quality. Hence come a want of appetite, sickness and vomiting, looseness or costiveness, pain and oppression, flatulencies and heartburns, acid and other eructations, and all the ills of bad digestion. It is only in this deranged state of the stomach, and depraved condition of the gastric juice, that any thing like fermentation takes place in the digestion of the food.

Now, let me ask what would be the effect, if the animal, destined to live on vegetables, were forced to swallow animal food? or, if the animal destined to live on animals were forced to swallow vegetables? if the infant were forced

to live on old, instead of new milk, or on substances which require the powers of the gastric juice of the adult stomach for their digestion? "Use," indeed, "can almost change the stamp of Nature." But in this use there is certain disease; and, ere it be established, how often does Nature fall in the struggle? The school-boy robs the feathered songster of her young; he feeds them with incessant care, but the food which he provides is not the food of Nature; he and the wretched mother mourn their loss together. The domesticated calf, torn from the teats of its mother, often experiences a similar fate. The young of none of the other inferior animals are equally subject to disease and death. But woe to the human infant; for no living being is so maltreated!

FORCED to swallow a poisonous drug at his very entrance into life! Miserable infant!!! Only let this subject arrest your attention for a moment. What does Nature say? That the

very first substance which, should enter the infant's stomach is your newly secreted milk, secreted with qualities which no other substance can supply—with qualities exactly suited to the state of the new-born stomach, and to the nature of its gastric juice. What, then, must be the effect of any other substance? But, of all things on earth, what must be the effect of his common physic? It operates as a poison, throwing the stomach and bowels of the infant into the most violent, painful, and destructive action, in order to expel it; or as a poison directly destroying their sensibility, and suspending their action, leaving the infant with scarcely life to breathe.

WHAT a shock has the stomach and bowels of the new-born infant undergone? Attacked by a destructive substance at the very commencement of their action,—at a time when they could bear the contact of no substance but their own natural stimulus,—the first fruits

of your breasts. They are therefore deeply deranged. The infant may suck, perhaps; but his gastric juice is morbidly secreted, and therefore his food is ill digested. Hence his gripes are severe, his dejections are curdled and slimy, and his vomitings are preternatural. Such are the effects of the sickening and destroying potion.

THE first cause then of derangement and disease in the stomach and bowels of the infant is physic; and, before these organs have time to recover their energies, they are attacked by other injurious powers—by the milk of another woman, or of the cow—by gruels, by paps, or panadas.

WHAT! the milk of another woman injurious! Most undoubtedly. It may be the next thing to your own milk; but it is not the food which Nature intended for your infant. It is not a product of the fluids by which he was nourished and formed in the womb; it is

foreign to his nature. Besides, it is not the milk of a woman newly delivered. It has undergone a change, for one thing—it has acquired a greater consistence, a greater quantity of curd. It has no regular affinity to the gastric juice of your new-born infant. Use, indeed, may bring his stomach to digest it: but in this use there must be a struggle—there must be disease.

If this be the case with the milk of one of your own species, how much more so with the milk of the cow? Look back upon her milk; compare it with your own, and see the difference. Dilute it, or do with it what you will, it must still be a cause of disease in the early period of infancy.

Now, if any other milk but your own be a cause of disease at this period, what must be the effect of those combinations which art affords—of gruels and panadas, solutions of sugar, combined with vegetable matters? They are almost all a direct poison to the infant.

PLACE a mess of your gruels or panadas, a solution of sugar and water mixed with flour or bread, in a certain temperature, and it will soon be in a state of general commotion—it will swell and froth, and discharge an abundance of air—fermentation and vinegar will be produced. Throw this same mixture into the stomach of the infant, and the same effects will speedily take place; for his gastric juice, unable to digest it, can produce no change in its nature, and therefore it continues subject to the same chemical laws of acetous fermentation.

WHAT, then, must be its effects? It deranges the infant's stomach,—it contaminates the secretion of his gastric juice,—it decomposes the milk, and prevents its digestion; it produces sickness, vomiting, flatulencies, the most excruciating gripes, and severe purgings; his dejections are sour, green, slimy, curdled, and undigested; the whole œconomy of his stomach and bowels is thrown into disorder and confusion; the source of nourishment is

cut off from his body ; he suffers poverty of fluids, emaciation, leanness, and softness of flesh ; other diseases supervene ; or death releases his miserable and tortured existence.

No wonder, then, that “very few infants die in the first months, in whom the stomach and alimentary canal are not, both at *first and last*, the evident seat of the disease.” It begins at their birth, as I have already said,—with the first dose of their physic ; and it is continued by unnatural and improper food—by food which their gastric juice cannot digest*.

Now let us turn our attention to the method of cure. And here I could almost leave the matter even to your own judgment.

Would it not direct you, in the first place, to remove the cause of the disease?---Would

* COLD, however, sometimes disturbs the œconomy of the infant’s stomach and bowels. But this cause is trifling, when compared to the causes of which I am speaking ; and its effects are readily removed by the due regulation of temperature.

not common sense teach you, that, while the cause continued to operate, the disease could not be removed; and, therefore, that it is the very first step to be taken in the treatment of the case? Nay, depend upon it, that it is the very essence of the cure, and that, in most cases, nothing else is necessary.

THIS sort of common sense, however—this indication of cure, has been too little regarded. “This diarrhœa,” says a writer from whom I have already quoted*, “is a complaint often as difficult to treat as any in the infant state, and is therefore worthy of particular notice. In a general way, it may be said, that a sufficient dose or two of rhubarb should be administered in the beginning, and afterwards absorbents. If the purging should still continue, an emetic will be necessary, as purges do not always lie long enough in the stomach to carry off the offensive matter it contains. After this, it is

* Underwood.

often necessary that the child be purged again; for it should be always remembered, that many complaints of infants, whether seated only in the first passages, or attended with fever, will frequently seem to be giving way upon procuring stools freely, but will soon return if the same means be not repeated, till the whole irritating matter be carried down. Should such repetition fail of success, though the diet has been carefully attended to, the use of them at present should be laid aside, and recourse be again had to absorbents, and, if there be no fever, to light cordials, and even to opiates; without the latter of which, many bowel complaints will not admit of a lasting cure, owing to the great irritability of infants."

HERE you have a true and faithful account of the general treatment employed in this disease. You perceive the principle on which it is founded:—the stomach and bowels must be *cleansed*—first by purges, and then by

cinetics, as the former “do not always lie long enough in the stomach to carry off the offensive matter!!!”

How many a poor infant has fallen a victim to this *offensive matter*! for, even after he has been vomited and purged, “it is often necessary that” he “be purged again;” as “it should be always remembered, that many complaints of infants, whether seated only in the first passages, or attended with fever, will frequently seem to be giving way upon procuring stools freely, but will soon return if the same means be not repeated, till the whole irritating matter be carried down!!!” And when will this happen? Not before the infant be *carried down* to the grave.

“SHOULD such repetition fail of success,” however—but how can it fail of success? Surely the *Materia Medica* is at hand, and affords a goodly supply of the proper materials. If “irritating matter,” therefore, be

the cause of the disease, and if the infant should happen to die, the practitioner is only to blame, in not having summoned his forces sufficiently to sweep away or *carry down the whole irritating matter.*

BUT whence comes this “irritating matter?” Is it not a product of unnatural or improper food—of food which the infant’s digestive powers cannot assimilate or digest? What then must be its effects? It is indeed an “irritating matter:” it operates as a drastic drug—it produces the most severe gripes—it throws the stomach and bowels into the most violent action. But, in all this irritation and action, do the stomach and bowels themselves sustain no injury? They suffer derangement, exhaustion of energy, subversion of their whole œconomy.

IN this condition of the infant—in this diseased state of his stomach and bowels, he is

to be vomited and purged, to discharge the “irritating matter.” But where is the need of this practice? The cause of the disease—the unnatural and improper food—produces its own expulsion. It operates exactly like a purgative drug. It is, or becomes, an “irritating matter”—it excites the stomach and bowels to preternatural action, and they rest not till they have expelled it.

IN this consists the very essence of the disease. It is, in fact, a purging produced by an injurious power. Continue its use, and keep the infant under continued purging, or at length derange his stomach and bowels till death ensues. Discontinue it, and the bowels will soon get rid of the last dose, and return to the healthful state.

How simple, how beautiful, how efficacious and salutary, are the indications of Nature! Her voice is plain and obvious. She bids you remove the cause of the infant's disease, his

improper food ; and supply him with his natural food, your own milk. She then declares that she will discharge from his stomach and bowels the very last particle of every offensive or irritating matter, raise their energies, restore their due œconomy, bring order out of confusion, the harmony of health out of the disorder and derangement of disease.

HEARKEN, therefore, to Nature's voice. When you see your infant labouring under severe purging and griping, and all the ills of deranged bowels, see that they be not still farther deranged by vomits or purges, or any other deranging power ; stop the current of injurious operation ; remove the struggles and turmoils of Nature ; free her from injury and oppression. If she has not been too much overpowered, she will do her own work ; if she has, raise her energies, and assist her operations by gentle cordials and invigorating powers.

Would you but attend to these simple rules, how rapidly would disease be removed, how many lives would be saved ! But your education has been false, and your prejudices are strong. You deal only in drugs. But, when you see the emetic or cathartic potion prepared for your infant, think what you are about. The moment is big with his fate. They may give his stomach and bowels the last shock,—a shock never to be recovered !

THESE rules are not merely speculative. They are founded on Nature ; they are supported by practice and experience. I have tried them both in the private nursery, and in the practice of the Dispensary. And I can well assure you, that, when the operation of every deranging and injurious power is removed from the infant's body, and the powers of life and health duly applied ; when the energies of Nature are thus relieved from oppression, and roused into action, her efforts are

incalculable. Let your infant be treated in this manner, and scarcely despair.

WOULD that you had a proper reliance on the salutary efforts and operations of Nature, and a proper detestation of the destructive contrivances of Art! Let no prejudice bear sway over you. Peruse the following important quotation, and lay it to heart.

“IT would be well, however, if the idea of the necessity of giving medicines to children, was confined to one opening dose, to purge off the *meconium*. Unfortunately, the error committed at the birth is repeated again and again, and seldom ceases but with the poor creature's life. Opiates are deemed necessary to make it sleep; carminatives to expel wind, or to cure the gripes; laxatives and emetics to cleanse the stomach; and ten thousand other unavailing and pernicious contrivances to relieve complaints, which are entirely the effects of bad nursing, and which admit of no

remedy but by a complete reform in that department.

“ WHEN a medical man is sent for to attend an infant, his first duty is to enquire into the conduct of the nurse; and, if there are faults, to have them rectified. He will seldom find occasion to prescribe any thing else. There cannot be a greater error, than to suppose that the faults of nurses may be repaired by drugs. Medicine, however skilfully administered, cannot supply the place of proper nursing; and, when given without skill, which I fear is too often the case, it must be productive of much mischief. The following facts will place this matter in the clearest light.

“ ABOUT forty years ago, when I undertook the charge of a large branch of the Foundling Hospital, at Ackworth, in Yorkshire, I found that the children at nurse had, till then, been attended by the country apothecaries; who, sure of being paid for their drugs, always

took care to exhibit them with a liberal hand. Every cupboard and every shelf in the house was filled with phials and gallipots. Under such treatment, half the children died annually. As it was evident to me, that this mortality could not be natural, I suggested to the governors, that the children had little or no occasion for medicines; and that, with proper care, they would thrive and do well. A new arrangement took place. The nurses were forbidden, at their peril, to give any medicine but what should be ordered by me; and were advised to rely more on the faithful discharge of their duty than on doses of physic. The consequence was, that the expence for drugs did not amount to a hundredth part of what it had been before; and that not above one in fifty of the children died annually. An opportunity of making experiments on so extensive a scale seldom occurs. I had at that time the sole superintendence of an immense number of children, spread over a fine healthy country,

where the nurses found it their interest to do, in every respect, what I desired, as they lost their appointment in case of the least neglect. The happy result of the plan left no doubt of its propriety. It was theory verified by practice.

“ A little reflexion would soon satisfy an attentive observer of Nature, that she never designed the young of any species to be brought up by the aid of medicine. Other animals, following the guidance of instinct, never fail in this important business: but man becomes in all things the creature of art, and is misled by it. I have frequently met with instances of families, who had lost every child while they trusted to physic and employed the faculty, but who, at length becoming wise through despair, and considering that their offspring could only die, left off the use of medicine altogether, and from that time never lost a single child. If we wish for a more general illustration of the effects of those two different

nodes of treatment, we shall find it in that part of the island where I was born (North Britain), and where the common people have a strong and very just aversion to giving their children medicines. The fruits of their good sense are displayed in a numerous and healthy progeny. But puniness, sickness, and death, find their way, in company with the doctor, into the houses of parents of higher rank. As the children of the latter are often observed not to thrive, the common remark is, *No wonder ! They gave the poor things physic !*

“IT is indeed possible, that cases may occur to justify the use of medicines ; but this very seldom happens when children are properly nursed, unless the poor creatures may have inherited debility from the enervated constitutions of their parents. I may go farther, and assert, that even when the frequent or continued use of medicines is deemed necessary, a child kept in existence by the help of

drugs has little reason to thank its parents for preserving its life. It lives only to be a burthen to society ; and never can be said to enjoy life, so much as to render the possession of it a blessing. In all other cases of slight and accidental indisposition, I do not hesitate to give a decided opinion, that medicines do injury at least twenty times for once that they do good.

“ A LATE writer on the management of children (Nelson) thinks it a matter of regret, that they can seldom be brought to take physic without force. When I consider the almost infinite number of young martyrs to medicine, instead of lamenting the circumstance here stated, I rejoice at it, from the fullest conviction, that if children had no reluctance to swallow drugs, we should lose a great many more of them. I know it is a common practice with many mothers to lay a child on its back, to stop its nose, and force the medicine down its throat. This is adding the danger of

suffocation, and the certainty of disgust, to the hazard of a dose too often in its own nature injurious. Bribing and coaxing children, as soon as they become susceptible of such impressions, are almost equally bad. Telling a child, that, if it will take its physic, it shall have a reward, is informing it beforehand that the potion is unpleasant; and, after that, the child is sure to refuse it, be it rendered ever so palatable. Where medicine is absolutely necessary, which, as I said before, is very seldom the case, it may be so contrived as to make a part of the child's food. Besides, a child should be accustomed very early to refuse nothing, and it will not refuse to take medicine. It will act from habitual submission to authority, not from the cruel impulse of force, or the pernicious allurements of a bribe.

“ I COULD here point out many easy contrivances to make children take physic, were I not assured that they are already too often

poisoned by it. If drugs do not directly produce infirmity, diseases, or death, these are sure to be ultimately the consequence of substituting medicine in the place of proper nursing, and foolishly supposing that the former can supply the defects of the latter. Art opens all her resources in vain; nor can the greatest efforts of human ingenuity make amends for the want of good air, cleanliness, healthy breast-milk, wholesome food, and proper exercise. The neglect of any of these essential points is attended with irreparable mischief; and, on the contrary, a due attention to these precludes the necessity of any medical aid. Yet, so strangely addicted are some women to drench infants with drugs, that, when I employed nurses in my own family, it was with difficulty I could prevent them from giving medicines privately to the children. I hope that fathers will profit by this hint, to exert their utmost vigilance and authority in the like situation.

“ THERE is not any notion which I have found it more difficult to root out of the minds of mothers, than that children abound with ill-humours, and that these can be carried off only by purging medicines. If a spot appear on the skin, the child must have his guts scoured out, to make the offensive pimple vanish, and to *sweeten his blood*, as the mothers call it: They little know, and can hardly be made to conceive, that all purgatives, however mild in their operation, throw the stomach into immediate disorder, weaken its digestive powers, vitiate the juices designed for the solution of food, and thus prevent the due preparation of the chyle, whence the blood is formed. This is the sure way to generate noxious humours, instead of expelling them; and to taint or impoverish the vital stream, instead of purifying it.

“ THE other medicines, which the fears and follies of mothers have introduced into the nursery, are almost as pernicious. Had I

leisure to make out the long list of them, with a description of their effects at an early age, it would appear that they ought to be more properly denominated poisons than remedies. They always do some injury; they cannot do any good: they are administered either frivolously, or for the relief of complaints which are caused by bad nursing, and which do not admit of a *medical* cure. To trust to physic for what physic cannot effect, is aggravating the evil of former errors by a still greater one, and quickening a poor infant's career to the grave. Were a law to be made, and strictly enforced, which should absolutely prohibit the administering of drugs to children, I am sure it would save the lives of thousands every year in this metropolis alone.

“ I HAVE elsewhere made a few remarks on the usual conduct of London mothers, whose faith in medicine does not seem in the least abated by the most striking and the most lamentable proofs, not merely of its inefficacy,

but of its perniciousness. Whenever any of their children appear indisposed, or do not seem to thrive, which must be frequently the case where they are so badly nursed, away the mothers run to the apothecary. His candour is too often checked; and even his judgment is liable to be biassed by his immediate interest. He derives his support from the sale of his drugs, and will seldom resist the temptation to send large supplies, where he knows the parents are in a condition to pay. Physic, in a variety of forms, is substituted for the only rational means of restoring the child's health—some necessary change of air, exercise, clothing, or diet: the mischief begun by the nurse, is completed by the doctor; and death comes, sooner or later, to put an end to the sufferings of the tortured victim.

“IT gives me pain to write any strictures on the interested views and reprehensible practice of even the lower orders of the faculty; but the

evil is of such magnitude, and so truly alarming, that it cannot be passed over in silence, nor mentioned without bursts of strong indignation. The weakness and the fears of mothers bring in the apothecary; and it requires an effort, to which not one in a thousand is equal, to get him out again. A bold busy man of that profession wants only a few timid mothers to make his fortune. But, mercy on the poor babes, who, to make his chariot roll, must swallow drugs every day! Yet, such is the infatuation of mothers, that, if this be not done, they think their children neglected, and dismiss one apothecary to make way for another, who administers medicines with a more liberal, or rather a more destructive, hand.

“ If the apothecary be a dangerous man, the quack is still more so. Yet I hardly ever knew a mother or nurse, who had not by her the nostrum of some quack, with which she every now and then kept dosing the infant. Were the boasted specific, like the anodyne neck-

lace, a mere chip in porridge, it would do no harm to the child, and would serve only to amuse the mother, and to levy a contribution on her credulity. But it is very often made up of active ingredients, which ought to be administered with the greatest circumspection. Most of the nostrums given to children, are strong opiates or purgatives, of a nature very different from the innocent efficacy of a good nurse's lullabies. They may quiet or compose the infant, and seem to give it ease for a time, but they never fail to destroy the powers of digestion, and to induce universal debility, with all its baneful consequences.*"

II. THE second division of our subject includes the affection of the infant's nose, called snuffles, displayed by a difficulty of breathing through the nostrils, and a discharge of matter; the affection of his lungs, displayed by cough and disturbed respiration; and the

* Buchan's Advice to Mothers.

affection of his eyes, displayed by inflammation and its consequences.

I HAVE classed these affections together, because they are all diseases of inflammation, and because they are chiefly produced by the same exciting power—the undue operation of temperature. Hence the following subjects are to be considered: First, the relation which exists between the living body and heat, or temperature; and, Secondly, the modes in which it produces inflammation.

1. To the first of these topics I have adverted in the former Discourse. But, for the sake of connexion and illustration, I would here repeat, that the internal heat of the living body is higher than the common heat of the atmosphere; that this heat is produced by the process of respiration, and is diffused throughout the whole body; and that there is a constant escape of heat from the surface of the body to the atmosphere.

THIS being the case, then, that there is a constant production of heat by the process of respiration, and that it is as constantly passing off from the surface of the body to the atmosphere, it follows that it must pass off in a higher or lower degree, according to the heat of the surrounding medium. For example, in a day of keen frost, it passes off in a high degree; hence the sensation of cold. In a mild day, it passes off in a lower degree; hence we feel agreeable. In a warm day it passes off in a still lower degree; hence we are oppressed with heat. And, were the temperature of the atmosphere to rise higher than the internal temperature of the body, instead of heat passing from the body to the atmosphere, it would pass from the atmosphere into the body; and this would actually take place, were it not that the sweat flows from every pore, and still keeps up the escape of heat from the body to the atmosphere, by means of evaporation.*

* A more minute investigation of this subject is foreign to the object of this Discourse.

A KNOWLEDGE of these laws of heat is of the highest importance, in a medical point of view : by this knowledge, we understand how the body is preserved in health, and how it is injured and thrown into disease by heat ; for when the heat of the body passes off in moderate or due proportion, health is preserved ; but when it passes off either in too high or in too low a degree, or when these degrees suddenly alternate, as when the external temperature changes suddenly from cold to heat, or from heat to cold, disease is produced.

2. BUT let us inquire more particularly into the different modes in which heat or temperature produces inflammation.

FIRST, Inflammation is produced, and the texture of a part is destroyed by the excessive action of heat. For example, the heat of boiling water, or of a piece of heated iron, produces high inflammation and ulceration : the heat passes from the heated body into the part

to which it is applied, and produces excessive action; this action ends in high inflammation, or in the death of a certain portion of the living matter; a deep slough is separated; and there remains a deep, extensive, and highly-inflamed ulcer: this ulcer is surrounded with high inflammation, and it granulates and heals but slowly: the tone or energy of the surrounding vessels is weakened by the excessive action of heat, and hence there is a slow and tedious re-production of the lost substance.

SECONDLY, Inflammation is induced, and the texture of a part destroyed, by the excess of colds, or the deficient action of heat. The too great eduction of heat produces chilblains, frost-biting, or gangrene. The part first inflames, then tumefies, and then mortifies: if it suppurates, it heals slowly; if it gangrenes, the dead parts are slowly separated, and there is a slow re-production of the lost substance. There is inflammation, and a languid action in the surrounding vessels; their energies are

weakened by the too great abstraction and deficient action of heat.

THESE are the effects of extremes of temperature, in regard to the living body. But, Thirdly, Inflammation is more frequently produced by the increased or diminished action of heat within a more limited range, or rather by alternations of temperature. For example, when the temperature rises to a certain extent above the healthful point, then suddenly falls to a certain extent below it, direct is added to a certain degree of indirect debility : hence the production of inflammatory affections, by a decrease of temperature, as in passing from a warmer to a colder apartment, or as in the case of warm summer weather being suddenly succeeded by a cold and moist atmosphere. On the other hand, when the temperature falls to a certain extent below the healthful point, and suddenly rises to a certain degree above it, then indirect is superinduced to a certain degree of direct

debility: Hence the cause of inflammation by an increase of temperature, as in passing from a colder to a warmer apartment; or as when the vernal heats suddenly succeed the winter colds.

Thus, in every case of inflammation, whether arising from the excessive or deficient action of heat, or from alternations of temperature, the part inflamed is deranged or debilitated—for this is the natural and necessary effect of deficient as well as excessive action; and, these actions alternating, must produce the same effect. It is easy to conceive, that vessels which have been over-excited or exhausted, will be more apt to suffer from the deficient action of an exciting power, than those which have been preserved in moderate or healthful action; and, on the other hand, those which have had their vital power or energy diminished by the reduction of a stimulus, will be more apt to suffer by

its sudden and increased re-application. These things are fully exemplified in those cases of inflammation produced by alternations of temperature, and from the frequent occurrence of inflammation. From this source, it appears that this mode of its action is scarcely inferior, in hurtful power, to the greater extremes of heat and cold.

IN this manner temperature operates locally. It operates on all the parts with which the air comes in contact in its passage to the lungs; hence inflammation in the mucous membrane of the nose, the throat, the wind-pipe, and its numerous ramifications. It operates on the viscera of the breast and their investing membrane; hence pneumonia and peripneumonia. It operates on the surface of the body, and parts near the surface; hence erysipelas, or St. Anthony's fire, rheumatism, and inflamed eyes. It operates either excessively or deficiently, or its increased and decreased action alternate; and, in all these forms of its action, it deranges or

debilitates the part on which it operates, and produces inflammation.

Now let us see in what condition the infant stands, in regard to temperature. Before his birth, he enjoys the internal temperature of his mother's body; and this temperature is without change or variation. But no sooner is he born, than his respiration commences his own lungs are now the source of heat to his system; and the heat produced by the process of respiration passes off from the surface of his body, in a higher or lower degree, according to the temperature of the apartment in which he is born, or according to the nature and temperature of the substances which are applied to his body.

Thus the infant, at birth, undergoes a sudden and a material change, in regard to temperature,—so sudden and so material, that it is wonderful he does not suffer in every instance.

But the provisions of Nature are equally wonderful ; and when he does suffer, it is owing to preposterous management, to the temperature of the apartment in which he is born being too low, or to exposure to vicissitudes of heat and cold.

THE undue operation of temperature then is the cause of the affections of which I am speaking. It operates on the mucous membrane of the infant's nose ; and in one case it produces a slight inflammation, with little or no discharge ; in another, the inflammation is more severe, with a discharge of matter ; and, in a third, it extends to the throat, and is attended with swelling of glands and specks, and sometimes with ulceration. It operates on the wind-pipe and lungs, and produces inflammation and morbid secretion, which, in one instance, is attended with a simple cough ; in another, with a cough and difficulty of breathing ; and, in a third, it assumes the form of asthma. It also operates on the

eyes, where the inflammation is sometimes slight, with little or no discharge; sometimes more severe, with a watery discharge; and sometimes still more severe, with a discharge of pus or purulent matter—ending, in some instances, either in specks upon the eye, or in its entire destruction.

Thus you perceive, that these affections take place in different degrees, or are more or less severe in different cases. To what can this be owing? It must either be owing to the degree of force in the operation of the exciting cause, or to the state or condition of the infant's body, or to a conjunction of these causes.

For example, A. is a healthful infant: in him temperature produces inflammation more or less severe, in proportion to the degree in which it operates unduly. But B. is a diseased infant; his system has been previously deranged by other causes—by physic and im-

proper food, &c. or perhaps his constitution is scrofulous, or inherits an infectious taint; in him again inflammation is more or less severe, not only in proportion to the degree in which temperature operates unduly, but also in proportion to the degree in which his constitution is unsound or diseased. Understand, therefore, generally speaking, that the undue or disproportionate operation of temperature produces a more severe, extensive, and obstinate inflammation in the unsound, deranged, or diseased infant, than in the infant sound and healthful.

THESE principles are so important in the treatment of inflammation, that I would extend their illustration, by contrasting them with the common opinions of professors on this subject.

I OBSERVE, therefore, that there is perhaps nothing so preposterous as the commonly-received opinions concerning pre-disposing

causes, and pre-disposition to inflammation. "The most remarkable of these," says a modern writer,* "is a full plethoric habit of body, induced, either by a very nourishing diet, or want of exercise; or, perhaps, by a combination of both. These disorders, too, are observed to be more frequent in young than in old people, and in men than in women."

How all these things should thus come to pass, we are not informed; how "a full plethoric habit of body" disposes to inflammation; or how it is more frequent in young than in old people, and in men than in women." But, if we mistake not, the meaning of the whole is, that the most athletic, vigorous, and healthful, are most liable to inflammation. A very nourishing diet, and want of exercise, and, more especially, a combination of these

* Benjamin Bell.

causes, is understood to produce plethora, or too much blood. It is the commonly-received opinion, that the young are more vigorous than the old; and it is generally thought, that men are more robust than women. The most plethoric, vigorous, and robust, therefore, are supposed to be the subjects of inflammation. Yet it is somewhat odd, that, in this respect, inflammation should differ from every other disease; for it is, perhaps, an universal truth, that the health and vigour of the body forms its power of resistance to those causes which produce the morbid state; or, in other words, in proportion as the body recedes from health, morbid agents have proportionally the greater power over it. This is equally true with regard to inflammation. In proportion to the derangement or debility of the body, or in proportion as it recedes from health, it is proportionally liable to inflammatory affections, and these affections are proportionally disposed to unfavourable terminations.

IN support of this position, we have only to advert to the consequences of surgical operation,—to the greatest and most important discovery in modern surgery,—the re-union or adhesion of divided parts. In a sound and healthful constitution, this process speedily takes place; and the re-union of divided parts is soon effected, provided they be brought into direct and immediate contact. Here there is no inflammation, or it is only in a very slight degree. It ought scarcely to bear the name of inflammation; for it is rather a strong and healthful action of the vessels re-uniting the divided part.

BUT the converse of all this takes place in a deranged or debilitated constitution. In this constitution, the same wound inflames and refuses to unite. It swells, separates, and opens; it discharges a thin, ill-digested matter; there is oozing of blood, bursting of arteries, gangrene of the soft parts, and exfoliation of

the bones. These are the effects of a deranged or debilitated constitution; and the greater the debility, the greater the inflammation, fever, and pain, and every unfavorable symptom. It is the strength or weakness of the body that modifies the re-union of divided parts, or the healing of wounds. In a sound and healthful body, a wound adheres; in a deranged and weakened body, it inflames and suppurates; and, in a still more highly weakened and diseased body, it inflames and mortifies.

It is then the sound or vigorous state of the animal body which forms its power of resistance to the injuries of the knife, and disposes wounds to heal. The same power extends its influence to every other mechanical injury, to every exciting cause of inflammation; nay, to every exciting cause of disease. In every sprain and every bruise, it is the vigorous and active state of the vessels which disposes to the absorption and circulation of extravasated and accumulated fluids, prevents

the worst consequences, and shortens the duration of the injury. The same vigorous and healthful state resists the force of every chemical cause of inflammation; and when these causes do operate to the extent of producing inflammation, or destroying the texture of the parts, the healthful excitement of the body disposes the inflammation to resolve or to suppurate kindly, prevents gangrene, and, when it actually takes place, throws off the dead and mortified parts, and re-produces the lost substance. In short, inflammation, in all its varieties, and from whatever cause it may arise, differs not in this respect from any other disease. The more vigorous and healthful the body is, the more does it resist the influence of every cause of inflammation; and, in proportion as it recedes from health, or is deranged or debilitated, these causes have the greater power over it.

THIS doctrine is strictly applicable to every other disease; and how an opposite one should have been proposed, with regard to inflammation, it is not easy to conceive; how health and strength should pre-dispose to inflammation; or how it should be founded on an exuberance of health or vigour, requiring for its cure the most low and impoverishing diet, and profuse and powerful evacuations. But a just view of the subject will neither support the doctrine nor the practice. The pre-disposing causes neither produce plethora (an over-fullness of blood), nor establish an exuberance of health or vigour. "A very nourishing diet, or want of exercise," and more especially the conjoint operation of these causes, may seem, at first sight, to produce "a full plethoric habit of body." But this is not their true and permanent effect; for, while they seem to increase the quantity of the fluids, they also increase the quantity of the secretions; they produce corpulency, or fatness, and not

plethora, or too much blood; and, while they produce corpulency, they produce debility. A very nourishing diet oppresses the powers of Nature; and, while it gives strength in the first instance, it soon exhausts the energies of the system. Indolence, or “want of exercise,” is a powerful source of debility; and, while a person employs “a very nourishing diet,” and is at the same time indolent, he will be sufficiently fat or corpulent, but deficient in strength or vigour. He is incapable of exertion, and easily fatigued; he is luxurious, indolent, and corpulent; yet, most probably, not more plethoric, or more full of blood, than his slender and labouring neighbour; he is the prey of gouty inflammation, of erysipelas, or St. Anthony’s fire, &c. while the temperate, active, and vigorous man knows nothing of such maladies.

THIS has been a great error in medical reasoning, to which many a victim has fallen—confounding fatness, or corpulency, with plethora—or supposing corpulency an indication

of too much blood, as well as of vigour and increased action, and of an inflammatory diathesis. The more important effects of the powers which produce corpulency have been entirely overlooked. Excess in eating and drinking, and indolence, while they produce fatness or corpulency, derange or debilitate the constitution; and this is the constitution most liable to inflammation: it is liable to these affections from the slightest causes; while the same, or much more powerful causes, produce no such effect in the vigorous and healthful body. And these affections are not "more frequent in young than in old people," because they are young; nor "in men than in women," because they are men. The debility of youth and of old age predisposes to inflammation; and the deranged or debilitated of either sex are equally obnoxious to the influence of its exciting causes. In every age, and sex, and condition of life, it is derangement, or debility, that predisposes to inflammation: the rich are predisposed to it by excess and inde-

lence; the poor by want and labour; while the temperate and active man, sound and vigorous in constitution, resists the influence of the causes which produce it.

FROM all this it would seem, that the common practice employed in the cure of inflammation, ought to be entirely rejected; that the body ought to be invigorated, and not debilitated; and that a strict diet, with bleeding and other evacuations, must increase the effects, both of the predisposing, and of the immediate causes of the disease. This is, doubtless, the effect of the practice. When inflammation takes place in a body deranged or debilitated, a strict diet and evacuations are as dangerous and destructive as in other diseases of debility.

THIS method of cure, therefore, is not admissible in a weakened and deranged body. It is only applicable in the vigorous constitution, where the exciting causes have operated

forcibly on an important organ, and where the irritation of the inflamed part acts as a powerful stimulus to the system. Here evacuations and a strict regimen are indicated to diminish the sum total of stimulant action, that the system may not become dangerously exhausted, while the stimulus or irritation of the part inflamed is to be removed by local remedies, and thus conducted to a favorable termination.

Thus you perceive, that this method of cure has its limitations. It is not admissible in the deranged or debilitated body; it is scarcely admissible even under the debility of growth; and still less in the most vigorous and healthful infant; because his stamina are delicate and feeble, and do not admit of high excitement or vigorous action. Nourished by his mother's milk, and no injurious power applied to his body, his excitement rises to the healthful point, but no further. Fed by unnatural and improper food, exposed to the undue operation of temperature, and

plied with destructive drugs, his excitement is lowered, his constitution is deranged; and, in proportion to this derangement, he is proportionally liable to inflammatory affections; and these affections, generally speaking, are proportionally severe and obstinate.

Now, these observations naturally lead me to consider the method of cure; and they will naturally suggest to you, that the general state or condition of the infant's constitution is here a material and important consideration.

PROCEEDING, therefore, on this principle, I shall begin with the affection of the infant's nose; then take the affection of his lungs; and, lastly, the affection of his eyes. The observations, however, which I shall offer, with regard to the first, will, generally speaking, apply to the whole. But I am induced to consider them apart, because they have been treated as separate diseases by other

writers, and because some of the practices which they recommend require animadversion.

1st. I BEGIN, then, with the affection of the infant's nose. And here you will remember, that this inflammation is more or less extensive and severe in different cases; that in one case it is only a slight inflammation, with little or no discharge; that in another it is more severe, with a discharge of matter; that in a third it extends from the nostrils to the throat, and is attended with swelling of glands, &c. and that it is modified thus, in some measure, by the degree in which temperature, the exciting cause, has operated unduly, but chiefly by the state or condition of the infant's body, in regard to soundness or unsoundness, strength or weakness, health or disease.

THE indication of cure then embraces two objects—the local affection, and the state or condition of the body itself. You remove the cause of the local affection; you exert your

utmost care that the infant be no longer subjected to the undue action of temperature, but preserved in an equable and genial degree of heat. At the same time, you are not neglectful of the state of his body. You consider how far it is deranged or diseased. You investigate the causes of its derangement; you do away their operations; and, if necessary, you call in the aid of such powers as are fitted to remove their effects—as are fitted to assist the operations of Nature in raising the energies of the system; and, in proportion as they rise towards health, so in proportion will the local affection yield, and ultimately disappear.

PROCEED on these principles then and be cautious of the use of every deranging or debilitating power. *Avoid* the method of cure which I am about to lay before you.

“ THE plan of treatment which I adopted in the first instances I met with, was to keep the body cool and open; or, if the infant happened to be over-purged, or was languid, to administer absorbents and cordials. I recommended the nurse’s diet to be attended to, when a child is suckled, and to keep a little blister open on its head, or on the nape of the neck; but this has since appeared, in some instances, to be hazardous, although no evil ever ensued, where I had directed it.

“ I HAD attained no further knowledge of this complaint, when Dr. Denman obliged the public with a more ample and formidable detail of it; which had fallen more frequently in his way than it had done in any other practitioner’s.”

THE substance of this “*formidable detail*” “is that the true source then appears to be a defluxion and inflammation over all that extent

of *Schneider's* membrane, lining the antrum *Higmoreanum*, posterior nostrils, and contiguous parts. Hence, the copious secretion of purulent matter irritates the trachea, and produces that spasm and croaking noise, with recurring sense of suffocation, so uniformly observed in this disease. By descending into the stomach and bowels, it disorders these parts; and, if not very soon properly treated, induces such general disease as presently debilitates, and at an uncertain but generally an early period, carries off the little patient, in the manner that has been already described. The stools, it may be noticed, are oftentimes thick and pasty; and when otherwise, after repeated purges, they are of a peculiar green colour; or sometimes blue, different from what I have noticed on almost any other occasion.

“FROM this account of the disorder, an attention to the state of the bowels, as I intimated in the first instance I had seen of it is

the manifest indication ; but with this further light thrown upon it by Dr. Denman, that keeping them very open, so as to prevent the lodgment of the matter falling into them, is the grand mean of cure ; there being much less to be effected by absorbents and antacids, to correct the constant sourness and ill-condition of the stools, than by carrying them off speedily and frequently.

“ To this end, one or more tea-spoonsfull of castor-oil should be given every day, so as to procure three or four motions daily. If a child should be weakened by this mean, which will rarely be the case, some cordial medicine should be occasionally interposed ; or, should this prove insufficient to support the infant, the purgative must be somewhat abated : but it is remarkable, that even weak infants endure purging better under this complaint than any other, unless it be the tooth-fever. If a convulsion fit should supervene, as it sometimes does, clysters, and the usual remedies for spasm should be ad-

ministered, and especially the cordial; which breaking off wind from the stomach, and giving tone to the bowels, becomes a very useful one in this case. In several instances, a recourse to opium, or syrup of white poppies, has been attended with good effect; and may, in that case, be administered every night when the purgative has operated properly. Or, a good medicine, in many cases, is Dalby's Carminative, which may be given every six or eight hours; and particularly when repeated doses of the laxative medicine are given through the day. From eight to twenty drops, or more, may, in that case, be given between each dose of the purgative.

“Under such treatment, the morbid snuffles has been found to yield in the course of two or three weeks; some purging medicine being continued as long as the discharge, or difficulty of breathing, shall remain. It, however, sometimes runs on as much longer, and is attended with a spasm in respiration, as if the infant were dying: this symptom, as well

as the snuffling, often recurring some time after an infant has seemed to be cured. In such instances, besides purging, it has been thought useful to foment the bridge of the nose, and afterwards apply some aromatic liniment.

“When the disorder is found not only to hang on for many weeks, (as it sometimes will, where it has not been peculiarly violent) but together with the continued use of purges, to keep the infant pallid and feeble, notwithstanding the exhibition of cordial medicines; a recourse to the decoction of oak-bark has at once removed the snuffling, and given vigour to the child in the course even of a few days.”*

Thus ends the substance of the “formidable detail of this complaint.” But where does it begin? not at the cause of the complaint,

* Underwood.

or the complaint itself, but at the supposed effect of the complaint. “An attention to the state of the bowels, as I intimated in the first instance, I had seen of it, is the manifest indication; but with this further light thrown upon it by Dr. Denman, that keeping them very open, so as to prevent the lodgment of the matter falling into them, is the *grand* mean of cure.”

BUT is there no *grander* “mean of cure,” than this? Would it not be still *grander* to proceed radically in the business, that is, to cure the local affection, and thus put a stop to, or “prevent the lodgment of the matter falling into the bowels.” Of this, however, there is not a word in the whole *detail*, *ample* and *formidable* as it is. We are merely directed to give the infant purgatives and cordials alternately, till no body knows when.

WE are told, indeed, that “under such treatment, the morbid-snuffles has been found

to yield in the course of two or three weeks." But we are also told, that "it sometimes runs on as much longer, and is attended with a spasm in respiration as if the infant were dying." Wonder not, for the disorder having run "on as much longer," the diseased and feeble infant has now been purged with *castor-oil*, or some such drastic drug, for four or six weeks; "some purging medicine being continued as long as the discharge, or difficulty of breathing, shall remain!!"

For what purpose?—"to prevent the lodgment of the matter falling into the stomach and bowels," which by *so doing* "disorders these parts, and if not very soon properly treated, induces such general disease as presently debilitates, and at an uncertain, but generally an early period, carries off the little patient." But where is the proof that the matter has such deleterious powers? And besides, is not the "little patient" debilitated previously to its formation, or before it has time

to take up its *lodgment* in the bowels? If this be not the case, how is it, that “under every form of the disease, infants always appear weakly, and *as if* unwell;” that “children who have had the disorder only slightly, have become *otherwise* unwell;” and, that “such as have been brought up by hand have been dangerously ill in their bowels?” Surely there is not matter “under every form of the disease,” and throughout its whole progress, to make “infants always appear weakly and unwell;” and surely “such as have been brought up by hand,” stand in no need of matter to make them “dangerously ill in their bowels.”

“DR. DENMAN further notices a singular purple streak at the verge of the eye-lids, which he afterwards considered in a manner pathognomonic of the disease; and indeed, I have rarely met with the disease without it. He describes also, a general fullness about the throat and neck, externally, taking place soon after the commencement of the complaint,

which he seems to date from the appearance of the purulent discharge from the nose: though, it has been remarked, that this symptom, although one of the most formidable, may be entirely wanting.

“ THAT, when these symptoms had continued for some days, according to the strength of the patient and degree of the disease, children became pale and languid; and, that upon looking into the throat, the tonsils were found tumefied, and of a dark red colour, with ash-coloured specks upon them, and in some, there were extensive ulcerations. The parts on which blisters had been applied in the beginning of the disease, and which had been apparently healed, often sphacelated towards the conclusion.”*

Now what is this disease? Is it not the cynanche maligna, or putrid sore throat?

* Underwood.

And is not this a general as well as a local disease? Has any one seen it either in the infant or the adult without the most powerful derangement, or debility? at the very commencement of the local affection; nay, in many cases ere it appears; for as Dr. Cullen observes, "it most readily attacks the weak and infirm;" and therefore, in a peculiar manner, it attacks those infants brought up by hand," or who have gone through the common ordeal of infantile treatment.

BUT what has the matter to do in all this? Is it not like all the other symptoms, the effect of the exciting cause of the disease, and of the state of body, induced either by that exciting cause, or by other debilitating powers? Most unquestionably. The body is first subjected to the operation of injurious powers, and to one power which operates more forcibly on the nose and throat than on any other part. By these powers it is deranged or debilitated; the symptoms both of general and

local disease appear, but the matter last in order; for ere it be formed, the nose and throat must go through the processes of inflammation, swelling, and ulceration.

THE body then is deeply deranged, or diseased, previous to the formation of the matter; and this derangement increasing, "the infants gradually declined in their strength, and had a particular catch in respiration, as if the *velum pendulum palati* were elongated. They were unable to suck, though not universally; swallowed with difficulty whatever was given in a spoon; and died in convulsions, or with all the marks of great debility, though not on any particular day of the disease."*

WHAT then is the true indication of cure? Surely to stop the progress of this debility by the removal of every unnatural power from the infant's body, and by the application of every

agent capable of producing opposite effects to the cause or causes which deranged him. But the indication of cure which our authors propose is the very converse of this. It has no reference to the cause or causes of the disease, nor to the state of the local affection, nor to the condition of the infant's body. It lays hold of the ultimate effect of the disease, makes that effect the cause of all the mischief, and the mode of its removal a source of the infant's destruction.

How can it be otherwise? View the infant as he really is. See his constitution deranged from the very beginning of the disease; see him gradually declining in strength, unable to suck, and swallowing with difficulty; see blistered parts sphacelating or mortifying; in short, see him with all the marks of great debility, even ready to die in convulsions; see him under these circumstances, and say whether he be a subject for purgative drugs. Take the most healthful infant in existence,

and treat him with daily purgation, and in a short period mark the result.

BUT here you attack an infant already deeply deranged and diseased, and while you plunge him still deeper in the abyss of his destruction, what becomes of the local affection? While you destroy his body do you restore the disordered part? No.—If there be any truth in medical science, you disorganize it more and more, and thus you increase the production of the matter; the very thing you propose to diminish and remove.

You tell us, indeed, that “if a child should be weakened by this mean,” (by “one or more tea-spoonsful of *castor-oil*, given every day, so as to procure three or four motions daily,) some cordial medicine should be occasionally interposed; or should this prove insufficient to support the infant, the purgative must be somewhat abated; *or*, if a convulsion fit should supervene, as it

sometimes does, clysters, and the usual remedies for spasm should be administered; and especially the cordial which, *breaking off* wind from the stomach, and giving tone to the bowels, *becomes a very useful one in this case.*" But this is only pulling down with the one hand and building up with the other;* first destroying the energies of the infant's stomach and bowels, and then attempting to restore them by cordials; the former is an easy task, but the latter is most difficult. How easy to destroy the body, but how difficult to restore it? One deranging dose may do what all the cordials in nature can never undo.

How strange and remarkable, that any one should recommend a practice to others which his own experience shews to be injurious and destructive; a practice founded on false philosophy, on mere hypothesis; a prac-

* The common saying, that "Doctors make work for themselves," is here strictly applicable.

tice which cuts off the source of nourishment from the infant's body; weakens him, and keeps him pallid and feeble; deranges his stomach and bowels, destroys their tone, fills them with wind, and brings on convulsions, and which, to remove its effects, requires "clysters and the usual remedies for spasm; a recourse to opium or syrup of white poppies," and at last to DALBY'S *Carminative*!

AND after all, what happens? "When the disorder is found, not only to hang on for *many weeks*, (as it sometimes will where it has not been peculiarly violent;) but, together with the *continued use of purges*, to keep the infant *pallid and feeble*, notwithstanding the exhibition of *cordial medicines*; a recourse to the *decoction of oak-bark* has at once removed the snuffling, and given vigour to the child in the course, even, of a few days." How fortunate for the poor infant, had this *decoction* been employed at the beginning of his disease, before he had been kept *pallid and feeble* by the

by the *continued use of purges for many weeks*; or rather, had every injurious power been removed from his body, and every natural and healthful agent been duly and regularly applied. In this event, all the *purges* might have been saved, and the *decoction of oak-bark* consigned to the use of the tanner, being more fitted for the tanning of hides than for the stomach of an infant.

2. In the second place, temperature operates unduly upon the wind-pipe and lungs of the infant, and produces a morbid condition in these parts, which is sometimes attended with a simple cough; sometimes with a cough, expectoration, and difficulty of breathing; and sometimes with the symptoms of adult asthma.

Now here, as in the former case, the indication of cure embraces two objects; the local affection, and the general state of the system. You do away the cause of the local disorder,

the undue operation of temperature; and you preserve the infant in a natural and healthful degree of heat, you keep him close and warm.

FIRST. In the mild form of the disease, where there is only a simple cough, with little or no morbid secretion; and where the infant's constitution is not otherwise deranged, this is all that you have to do: nature will do the rest; will remove the morbid and restore the healthful action of the disordered parts.

SECONDLY. But in the more severe form of the disease, where the morbid secretion is considerable, where the phlegm, or matter secreted, is tough, and not easily expectorated; where the cough seems painful and troublesome, and the breathing laborious; and where the system is otherwise deranged, along with the strict management of temperature, you must remove the action of every other injurious power; employ the warm bath, and in

urgent cases, blisters with proper stimulants and cordials, the whole to raise the actions of the system, excite gentle perspiration, unload the lungs, and change their morbid secretion.

IN addition to these remedies, common practice employs bleeding, emetics, and purgatives, and certain substances, called, demulcents and expectorants. But why should such agents be employed? Are they indicated upon any certain or rational grounds?

IN order to come at some determination on this point, we must enquire into the data on which these agents are prescribed, and view their effects upon the body.

BLEEDING is employed to remove what is termed a *phlogistic*, or an *inflammatory diathesis*. But ask any systematic physician what this diathesis is, and see whether he can tell you; or should he seem to have any notion of such a thing, see whether he can seriously sup-

pose its existence in the tender and delicate infant.

EMETICS are given to bring up the phlegm from the lungs. This they would certainly do were it lodged in the stomach. But lodged in the lungs, and adhering tenaciously to the minute and innumerable ramifications of the wind-pipe, it seems beyond the reach of their power. And although it should be admitted that emetics, by communicating a convulsive action to the lungs, might tend to the expulsion of the phlegm; yet, what a pitiable spectacle to see a helpless infant overpowered with sickness, at the same time screaming and crying, and vomiting, and almost choaked with phlegm, struggling for life, as it were, without strength, or the power of volition, either to assist the action of vomiting, or coughing, to rid itself of its incumbrances; nay, rather instinctively struggling to suppress these motions, as if nature abhorred the deed. Surely this practice is altogether too mecha-

nical. And should any one contend that emetics are useful, by determining the fluids to the surface of the body, (to speak in the cant of medical phraseology,) I answer, that this can be done by means more safe, salutary, and permanent in their effects.

BUT upon what principle are purgatives prescribed? I must confess I am totally at a loss even to conjecture. If it be to remove the phlegm from the lungs, let him who prescribes them explain how they can do this.* If to determine the fluids to the surface of the body, they must have a contrary effect. If to remove a *phlogistic* or an *inflammatory diathesis*, let it first be proved that such a diathesis exists. It is the fashion, however, to prescribe purgatives.

Demulcents are given to soften and inviscate the breast. It happens, however, that

* "Purging is seldom found to relieve the vessels of the thorax." Cullen.

they never get near it. You all know the effects of the smallest particle of any substance getting accidentally into the trachea, or wind-pipe. The most violent coughing is excited, and it never ceases till all the offending matter be expelled. The passage of any substance, except the air of the atmosphere, into the wind-pipe and lungs is a dangerous thing, and therefore nature has provided a very accurate valve, or lid to cover it, and close it up, while substances are passing from the mouth backwards, into the passage which leads down to the stomach. Thus it acts while demulcents are also passing, and thus they are safely lodged in the stomach, like every other substance taken into the mouth. They may indeed tend to allay irritation about the root of the tongue and neighbouring parts; but were there no other means more efficacious in suppressing a cough, how unfortunate for those who are really diseased in their lungs.

FINALLY. *Expectorants* are employed to

produce some imaginary change upon the phlegm, and thereby facilitate its discharge from the lungs. But like demulcents they pass into the stomach, and a part of them is discharged by stool, a part by urine, and the other excretions, and there they end; or at all events, they certainly do not produce any change upon the phlegm poured out into the wind-pipe and cells of the lungs.

WHAT then are the real effects of the agents of which we have been speaking? In a word, they are all deranging or debilitating powers. Bleeding abstracts the very essence of life. Vomiting and purging first derange the stomach and bowels, and then the whole frame. Demulcents and expectorants load and clog the infantile stomach, derange its œconomy, interrupt the digestive process, and cut off the source of nourishment from the system. Thus, upon the whole, by the use of these agents, the fluids are expended and impoverished, the solids are deranged and de-

bilitated, the energies of the system are weakened, the morbid secretion in the lungs is increased; they become more and more oppressed; they fail in strength, and are unable to raise or discharge the phlegm; the ways of life are now almost closed; the last effort for breath is frequently the last struggle of life.

THESE very symptoms, however, pain, oppression, difficulty of breathing, and cough, are the foundation of the doctrines of inflammation, obstruction, and too much blood. But the framers of these hypotheses did not duly consider the powers which produce the disorder; nor did they advert, (as an able writer* emphatically expresses it,) to “the difficulty and labour with which an enfeebled organ performs its accustomed and salutary action.”

BUT are bleeding and other evacuations admissible in no case of infantile catarrh? To

* Dr. Reid, in his excellent Treatise, on the Origin, Progress, Prevention, and Treatment of Consumption.

elucidate this point, I would carry your attention to the analogous disease of the adult.

THE catarrh, or common cold of the adult, is also produced by the undue, or disproportionate action of temperature; and its general symptoms are a sense of lassitude over the whole body, with shivering, at least the sensation of cold is increased, and the motions of the pulse are accelerated, especially in the evening.

THESE symptoms are seldom of long duration, till they be accompanied with a degree of hoarseness; a sense of roughness and soreness in the trachea or wind-pipe; some difficulty of breathing, and a cough which is generally, at first, without expectoration; exciting pains about the chest, but more particularly in the breast. In some cases, however, there are pains in other parts, but most frequently about the neck and head. The appetite is impaired,

some thirst arises, and a feverish lassitude is felt over the whole body.

Now what do these symptoms indicate? They indicate a disease of general debility, and “the difficulty and labour with which an enfeebled organ performs its accustomed and salutary action.” And that this is really the case is farther proved, by the almost never-failing method of cure, which consists in avoiding cold, the exciting cause of the disease, preserving an equable and genial temperature by lying in bed, exciting the actions of the system, and promoting perspiration by warm cordial drinks, and in some instances by stimulant medicines; and in applying heat to the deranged organs, or the local affection, by Mudge’s Inhaler.

LET it be remembered, however, that I am not speaking of catarrh, or rather pneumonia, in the robust or vigorous constitution, where there is high excitement, and where the actions

of the system are strongly excited by the irritation of the local affection. Here bleeding and other evacuations are indicated to lower these actions, that the powers of the system may not become dangerously exhausted.

BUT catarrh, or pneumonia, in the deranged or weakened body, requires a very different treatment. Instead of debilitating, it requires invigorating and cordial powers.

Now let these principles guide you in the treatment of the catarrh, or common cold, of the infant. View him first as an infant, and understand that his stamina are delicate and feeble, and unable to support high excitement. Compare his catarrh not with that of the robust and vigorous adult, but rather with the catarrh of the deranged and enfeebled body. Next, consider the mode of his management, or the powers which have been applied to his body, from the period of his birth till the time he became affected; ascertain their effects, and

in doing this, look into the state of his constitution; see how far it is sound and entire, or how far it is deranged or debilitated. Proceed in your practice accordingly, but proceed with the utmost caution, never forgetting that you are dealing with an infant.

THE local affection you are neither to forget, but, according to custom, you are not to make it the sole criterion of your practice. The symptoms may be severe, but you are not to injure the body for the sake of the lungs. A deranged vital organ, and a deranged and debilitated body meeting together constitute a dangerous case, and the more you expend the fluids and derange the solids, the more will the local affection prevail, till it may finally overpower the system.

3. The next affection of the infant's lungs, arising from the undue operation of temperature is asthma. "It is generally discovered," says Mr. Moss, "very soon after

the birth of the child. It does not attack so severely as a common cough; nor does the child seem to have so much pain from the cough, yet appears stuffed, and as if he would be suffocated at each fit of coughing; and has a difficulty of breathing at other times, especially when he is tossed, or hastily moved: in short, the appearances are every way the same as in a grown person with the *asthma*. He will often take the breast, or other food, as if nothing ailed him. If his cough, but particularly difficulty of breathing, increase upon him, as often is the case, he does not seem to thrive and get forward, but is overcome by them, and dies, commonly, at about three months old. On the contrary, if his cough, and difficulty of breathing do not increase, he sometimes thrives and looks tolerably, and seems pretty easy when kept still, quiet, and warm; but if exposed to the cold, or hastily moved, his cough, and appearance of suffocation return accordingly, and are proportionally violent; on which account he is deprived

of the benefit of air and exercise, in a great measure, particularly in cold weather. A child's life, in this situation, is not to be anxiously desired, as recoveries are so exceedingly slow and doubtful. I had occasion to see a child, in whose fate I was much interested, support this complaint fifteen months, at which period he died.

“ I have observed this complaint to be most common with the children of the poor; from which there is little doubt, that it is most commonly occasioned by cold caught by the child at the birth, or very soon after.”

IN attempting the alleviation or cure of this disorder, therefore, let the infant be carefully preserved from the influence of cold. “ For general benefit and relief,” says Mr. Moss, “ a clear air, free from fogs, and the smoke of a town, will be found to answer a desirable purpose; also, large airy rooms, that are dry in every situation.”

Thus far we proceed on sure grounds, and thus far we agree with Mr. Moss. But “when it happens, from cold, or any other cause, that the cough and difficulty of breathing are more than usually increased, will a puke give sensible relief? and when they are to excess, *does* a leech or two, according to the child’s strength, to the foot, or a blister between his shoulders, *become necessary?*”*

“There is a kind of cough, and difficulty of breathing, which children are subject to, that so much resembles the *asthma* of grown persons, as not to be distinguished from it: in short, the appearances are every way the same as in a grown person with the *asthma*; and although this is a complaint that can seldom be entirely removed, yet it will admit of relief, at those times it is most urgent, as, like the *asthma*, it is better and worse by turns.†”

* Moss, on Children.—† Ibid.

WHAT is it then but asthma? the same in its nature with the disease so termed in the adult. It follows, therefore, that the proper treatment of asthma in the adult, will throw light on the mode in which this affection should be treated in the infant.

IN treating of the asthma in the adult, Dr. Cullen sets out with observing, that it "is often an hereditary disease;" and after a detail of its history and exciting causes, he proposes the following hypothesis:—"From the whole of the history of asthma now delivered, I think it will readily appear, that the proximate cause of this disease is a preternatural, and, in some measure, a spasmodic constriction of the muscular fibres of the bronchiæ (the ramifications of the wind-pipe), which not only prevents the dilatation of the bronchiæ necessary to a free and full inspiration; but gives also a rigidity which prevents a full and free expiration. This preternatural constriction, like many other convulsive and spasmodic affec-

tions, is readily excited by a turgescence of the blood, or other cause of any unusual fullness and distension of the vessels of the lungs.*

ON this hypothesis, “a turgescence of the blood,” and on the idea, that “the danger of an asthmatic fit arises chiefly from the difficult transmission of the blood through the vessels of the lungs,” Dr. Cullen, proposes blood-letting in this disease, but by no means decidedly. His words are,—“As the danger of an asthmatic fit arises chiefly from the difficult transmission of the blood through the vessels of the lungs, threatening suffocation; so the most probable means of obviating this seems to be blood-letting; and therefore, in all violent fits *practitioners have had recourse to this remedy*. In first attacks, and especially in young and *plethoric* persons, blood letting may be very necessary, and is commonly

* First Lines of the Practice of Physic.

allowable. But it is also evident, that under the frequent recurrence of fits, blood-letting cannot be frequently repeated without *exhausting* and *weakening* the patient too much. It is further to be observed, that blood-letting is not so *necessary as might be imagined*, as the passage of the blood through the lungs is *not so much interrupted as has been commonly supposed.* This I particularly conclude from hence, that instead of the *suffusion* of the face, which is the usual effect of such interruption, the face, in asthmatic fits, is often *shrunk* and *pale.* I conclude the same also from this, that in asthmatic fits, blood-letting does *not commonly give so much relief as upon the contrary supposition might be expected.*"*

Well then, whether should blood-letting be employed or not? If to remove *plethora*, or an over-fulness of blood, let it be remembered,

* First Lines of the Practice of Physic.

that this doctrine is entirely supposititious,* and that this disease has not been “observed to be more frequent in one kind of temperament than in another, and does not seem to depend upon any general temperament of the whole body, but upon a particular constitution of the lungs alone.”† If blood-letting be used to obviate “threatening suffocation, the asthma, though often threatening immediate death, *seldom* occasions it; and *many* persons have lived long under this disease.”‡ If to remove “a turgescence of the blood in the vessels of the lungs,” let the existence of

* “Upon the *supposition* of asthmatics being in a *plethoric* state, purging might be supposed to prove a remedy in this disease: but, both because the *supposition* is not commonly well founded, and because purging is seldom found to relieve the vessels of the thorax, this remedy has not appeared to be well suited to asthmatics; and large purging has always been found to do much *harm*.” And “issues are certainly useful in obviating *plethora*; but, as such *indications seldom arise in cases of asthmas*, so issues have been *seldom* found useful in this disease.” First Lines, &c.

† First Lines, &c.—‡ First Lines, &c.

this turgescence be proved, and its causes fairly assigned. If turgidity be occasioned by "cold,"* let it be considered, that it is also "excited by heat, and by changes of the weather."† If "by exercise,"‡ also by

* "As asthmatic fits seem thus to depend upon some fulness of the vessels of the lungs, it is probable that an obstruction of perspiration, and the blood being less determined to the surface of the body, may favour an accumulation in the lungs, and thereby be a means of exciting asthma. This seems to be the case of those asthmatics, who have fits most frequently in the winter-season, and who have commonly more of a catarrhal affection accompanying the asthma; which therefore occurs more frequently in winter, and more manifestly from the application of cold." *First Lines.*

† "In some persons the fits are readily excited by external heat, whether of the weather, or of a warm chamber, and particularly by warm bathing. In such persons, fits are more frequent in summer, and particularly during the dog-days, than at other colder seasons. The same persons are also readily affected by changes of the weather; especially by sudden changes made from a colder to a warmer, or, what is commonly the same thing, from a heavier to a lighter atmosphere." *First Lines.*

‡ "They are also much affected by exercise, or whatever else can hurry the circulation of the blood." *First Lines.*

rest.* If “from any increased bulk of the stomach,”† this state of the stomach is not always present, it only “very frequently *precedes* the first attacks of the disease.”‡

* “The attacks of this disease are generally in the *night-time*, or towards the approach of night; but there are also some instances of their coming on in the course of the day; or, if during the day the difficulty of breathing has been moderate, and the person got some sleep in the first part of the night, he is, however, waked about *midnight*, or at some time between *midnight* and *two o'clock in the morning*; and is then *suddenly seized* with a fit of difficult breathing, which runs the same course as the night before.” First Lines, &c.

† The same persons are also affected by every circumstance straitening the capacity of the thorax, as by any ligature made, or even by a plaster laid upon it; and a like effect happens from any increased bulk of the stomach, either by a full meal, or by air collected in it.” First Lines, &c.

‡ “In the afternoon, he has an unusual flatulency of his stomach, and an unusual drowsiness; and very frequently these symptoms precede the first attacks of the disease; but whether these symptoms *appear* or *not*, the *difficulty of breathing returns* towards the evening; and then sometimes gradually increases, till it becomes as violent as in the night before.” First Lines, &c.

UPON what ground then is blood-letting to be employed in this disease? Is it enough, that in “all violent fits *practitioners* have had recourse to this remedy!” Or, is it not rather to be presumed, that the more violent the fits, the more deranged and debilitated is the body, and the more are the lungs under asthmatic disorganization?

DR. CULLEN, indeed, only proposes it, or rather admits, that “blood-letting may be very necessary, and is commonly allowable in first attacks, and especially in young and *plethoric* persons.” But is not “this disease an affection of the nervous system, and depending upon a mobility of the moving fibres of the lungs?” And does not this “appear pretty clearly, from its being frequently connected with other spasmodic affections, depending upon mobility; such as hysteria, hypochondriasis, dyspepsia, and atonic gout?”* And is it not “evident, that the disease must have

* First Lines. &c.

arisen chiefly from a peculiar constitution in the moving fibres of the bronchiæ, disposing them, upon various occasions, to fall into a spasmodic constriction; and therefore, that the entire cure of the disease can only be expected from the correcting of that predisposition, or from correcting the preternatural mobility or irritability of the lungs, in that respect?"*

WHERE then are the doctrines of "plethora and turgescence of the blood in the vessels of the lungs?" They are set at nought, not only by our author's own reasoning, but also by a consideration of the exciting causes of the disease, no one of which can possibly produce plethora.† And as to the excitation of fits, by "a turgescence of the blood,"—How

* First Lines, &c.

† "Beside these cases of asthma, excited by heat or cold, there are others in which the fits are especially excited, by powers applied to the nervous system; as, by passions of the mind, by particular odours, and by irritation of smoke and dust." First Lines, &c.

can this turgescence take place, when the causes which are said to produce it do not operate; when the patient has not been exposed, either to "heat or cold," or, changes of the weather;" or to any "circumstance straitening the capacity of the thorax, as by any ligature made, or even by a plaister laid upon it;" or to "any increased bulk of the stomach, either by a full meal, or by air collected in it;" or to "exercise, or whatever else can hurry the circulation of the blood?" Besides, when these causes do operate, their effects can be explained on better grounds than on a mere "turgescence of the blood in the vessels of the lungs."

Thus, upon the whole, the practice of blood-letting in asthma, is neither supported by the predisposing or exciting causes, nor by the symptoms; and neither can experience be urged in its defence.

BUT are emetics proper or admissible in the treatment of this disease? "As a flatulency

of the stomach," says Dr. Cullen, "and other symptoms of indigestion, are frequent attendants of asthma, and very troublesome to asthmatics; so, both for removing these symptoms, and for taking off *all determination* to the lungs, the frequent use of gentle vomits is proper in this disease. In certain cases, where a fit is expected to come on in the course of the night, a vomit given in the evening has frequently seemed to prevent it."*

ADMIT this, but consider the effects of "the frequent use of vomits," however "gentle," and the state of the stomach. "A flatulency of the stomach, and other symptoms of indigestion, are frequent attendants of asthma. Why? Because it is a part of the disease, of the "affection of the nervous system;" it is asthma "connected with dyspepsia," and dyspepsia consists in "an imbecility, loss of tone, and weaker action in the muscular fibres of the stomach."† Will "the frequent use of gentle

* First Lines, &c.—† Ibid.

vomits" remove this? No.—They will derange and debilitate the "fibres of the stomach" more and more; increase the "mobility of the moving fibres of the lungs," as well as the "affection of the nervous system," and fix both the dyspeptic and asthmatic symptoms deeper and deeper in the constitution.

WITH regard to blisters, Dr. Cullen observes, that "blistering between the shoulders, or upon the breast, has been frequently employed to relieve asthmatics; but, in the pure spasmodic asthma we treat of here, I have rarely found blisters useful, either in preventing or relieving fits."*

DR. CULLEN, after delivering his treatment of "plethora," of "turgescence of the blood in the vessels of the lungs," and of "flatulency, and other symptoms of indigestion in the stomach," proceeds to observe, that "although a plethoric state of the system may

* First Lines, &c.

seem to dispose to asthma, and the occasional turgescence of the blood may seem to be frequently the exciting cause of the fits; yet it is evident, that the disease must have arisen chiefly from a peculiar constitution in the moving fibres of the bronchiæ, disposing them, upon various occasions, to fall into a spasmodic constriction; and therefore, that the entire cure of the disease can only be expected from the correcting of that predisposition, or, from correcting the preternatural mobility or irritability of the lungs, in that respect.”*

Now, this is the true view of the subject at last; and on this ground, Dr. Cullen proposes the following indications, of preventing or alleviating the disease.†

* *First Lines, &c.*

† “As it is seldom that an asthma has been entirely cured, I therefore cannot propose any method of cure which experience has approved as generally successful. But the disease admits of alleviation, in several respects, from the use of remedies.” *First Lines, &c.*

“ In cases wherein this predisposition depends upon original conformation, the cure must be difficult, and perhaps impossible ; but it may, perhaps, be moderated by the use of antispasmodics. Upon this footing, various remedies of that kind have been commonly employed, and particularly the fœtid gums ; but we have not found them of any considerable efficacy, and have observed them to be sometimes hurtful, by their heating too much. Some other antispasmodics, which might be supposed powerful, such as musk, have not been properly tried. The vitriolic æther has been found to give relief, but its effects are not lasting.

“ As in other spasmodic affections, so in this, the most certain and powerful antispasmodic is opium. I have often found it effectual, and generally safe ; and if there have arisen doubts with respect to its safety, I believe they have arisen from not distinguishing between certain *plethoric* and inflammatory

cases of dyspnœa, improperly named asthma, and the genuine spasmodic asthma we treat of here.

“ As in many cases this disease depends upon a predisposition which cannot be corrected by our art, so in such cases the patient can only escape the disease by avoiding the occasional or exciting causes, which I have endeavoured to point out above. It is, however, difficult to give any general rules here, as different asthmatics have their different idiosyncrasies, with respect to externals. Thus, one asthmatic finds himself easiest living in the midst of a great city, while another cannot breathe but in the free air of the country. In the latter case, however, most asthmatics bear the air of a low ground, if tolerably free and dry, better than that of the mountain.

“ IN diet, also, there is some difference to be made with respect to different asthmatics. None of them bear a large or full meal, or

any food that is of slow and difficult solution in the stomach; but many of them bear animal food of the lighter kinds, and in moderate quantity. The use of vegetables, which readily prove flatulent, are always very hurtful. In recent asthma, and especially in the young and *plethoric*, a spare, light, and cool diet is proper, and commonly necessary; but, after the disease has continued for years, asthmatics commonly bear, and even require, a tolerably full diet, though, in all cases, a very full diet is very hurtful.

“ In drinking, water, or cool watery liquors, are the only safe and fit drinks for asthmatics; and all liquors ready to ferment and become flatulent are hurtful to them. Few asthmatics can bear any kind of strong drink; and any excess in such is always very hurtful to them. As asthmatics are commonly hurt by taking warm or tepid drink; so, both upon that account, and upon account of the

liquors weakening the nerves of the stomach, neither tea nor coffee is proper in this disease.

“ASTHMATICS commonly bear no bodily motion easily, but that of the most gentle kind. Riding, however, on horseback, or going in a carriage, and especially sailing, are often useful to asthmatics.”*

Now let us return to the infant, and in doing this, I would observe in the first place, that if the doctrines of plethora and turgescence of the blood be conjectural and supposititious, in regard to the adult, they are surely more so in respect to the infant. He has been subjected to no cause that can possibly produce plethora. He is attacked by the disease at an early period. Indeed, “there is little doubt,” as Mr. Moss observes, “that it is most commonly occasioned by cold, caught by the child at the birth, or very soon after.”

* First Lines, &c.

Cold then is the exciting cause; but this is not all, for it would seem, that “the asthma, strictly so called, is often an hereditary disease, *arising* chiefly from a peculiar constitution in the moving fibres of the bronchiæ, disposing them, upon various occasions, to fall into a spasmodic constriction.” Without this hereditary conformation, this peculiar constitution of the lungs, it is probable, that cold would only produce a simple cough, which would be easily removed. But, in this disease, “recoveries are exceedingly slow and doubtful;” in short, the infant “commonly dies at about three months old.”

But is the little sufferer to be left to his fate? No.—He may have “a peculiar constitution in the moving fibres of *his* lungs.” But this is not the immediate cause of the disease, for there is no appearance of disease, till the infant has been subjected to the impression of an injurious power, to “cold caught at the birth, or very soon after.”

Now, this “peculiar constitution in the moving fibres of the lungs cannot be corrected by our art;” but it is certainly possible that the lungs may be brought back to their pristine condition. To this effect, as Mr. Moss observes, “a clear air, free from fogs and the smoke of a town, will be found to answer a desirable purpose.” But above all, the strictest regard must be had to the regulation of temperature, nothing less than thermometrical precision, in this respect, will abate or remove the disease, or preserve the life of the asthmatic infant.

“If the child is dry nursed,” says Mr. Moss, “food that is thin, as milk and water, and now and then a little veal tea, will be found to agree; better with him, in regard to his breathing, than that made thick with bread,” &c. This may be true, but the asthmatic infant will scarcely be reared by *dry-nursing*. No adult asthmatic, as we have seen, “can bear a large or full meal, or any food that is

of slow and difficult solution in the stomach.” If this be the case with the adult, how much more so with the infant? Artificial food will not fail to derange his stomach, and excite the fits of this disease.

LET him be fed, therefore, with his mother’s milk; or, should she be incapable of affording it, let him have the milk of a healthful woman recently delivered. In a word, let him have every thing that can invigorate his constitution, and let him suffer the action of no deranging or debilitating power. Let these rules be strictly observed, whether in reference to the prevention of his disease, or to its alleviation or cure.

3. I now proceed to consider the treatment of the disordered conditions of the infant’s eyes. And were I, in the first place, to direct your attention to the structure of the eye, the function it is destined to perform, and the means which nature has employed for its de.

fence, you would view it as a tender and delicate organ, liable to injury from the most slight or trivial cause.

BUT this truth, which I might teach you from theory, you know by experience; you know the delicate nature of the eye, how it is inflamed by slight and trivial causes; how this inflammation is frequently attended with, or succeeded by, a watery discharge, or a discharge of matter; sometimes ending in a total destruction of the eye, or in a thickening of its coats, impairing or altogether destroying its vision.

IF this be state and condition of the adult eye, how much more susceptible and delicate the eye of the infant? Mark its peculiar circumstances: subjected, previously to birth, to the action of no exciting power, it performs none of its functions. Covered by the eyelid, and surrounded by an equable temperature, there is no power to injure it. Suddenly im-

pressed at birth, however, by the impulse of light, and instantly called into action, undergoing a material change of temperature, and tender and delicate in its structure, it scarcely can escape injury. But the works of nature are well ordered; for however tender, delicate, and highly susceptible, the eye of the newly-born infant may be, it is still able to bear the changes of birth. It is art, it is the injudicious application of light, heat, and cold, which throws it into disease.

To preserve the infantile eye, therefore, sound and entire, the impressions of light and temperature should be applied to it in the most gradual and imperceptible manner, and gradually increased with its increasing vigor, as it becomes accustomed to their action. But is this the common mode of its treatment? No.—From a state of total darkness in the womb, it is suddenly exposed to a strong light, from an equable and comparatively high temperature into one comparatively low and changeable; from a state of rest, it is suddenly

called into action. In short, little or no distinction is made between the infant and the adult. Instead of his natural state, the state of rest and sleep, he is finely dressed, carried through his own apartment, often through every apartment of the house, and sometimes even without doors. But in all the operations which he generally undergoes, how much do his delicate and susceptible eyes suffer the undue action of light and temperature? And what frequently follows? Inflammation, and all its consequences; sometimes a slight inflammation with little or no discharge, sometimes more severe with a watery discharge, and sometimes still more severe with a swelling of the eye-lids; a discharge of pus or purulent matter, ending, in some instances, either in specks upon the eye, or in its entire destruction.

1. Now, in entering upon the treatment of these affections, I need not repeat, that the first thing to be done, in the cure of any disease,

whether it be general or local, is to remove the action of the cause or causes which produced it. When the eyes of the infant, therefore, are slightly inflamed, you have scarcely more to do than to preserve them from any excess of light or cold, to keep the infant in a mild, genial, and uniform degree of heat. Placed in this situation with his constitution in health, performing its due and regular actions, nature will restore the tone and contractility of the weakened and inflamed vessels, and perform the cure. I say, again, how sovereign are the salutary operations of nature, and how little understood? How often interrupted and depressed, when, even without assistance, they would restore health, and preserve life? How unspeakably important were all the rules, and all the agents employed in the alleviation or removal of disease, brought to act in concert with these operations, with that sovereign law of the animal œconomy which tends to the reparation of all its injuries? But in the present case it will be suf-

ficient, generally speaking, to do away the operation of the causes which produced the disease, and nature will do the rest.

2. UNASSISTED nature, however, may not, perhaps, be able to perform the cure in the second species of the disease, for it is more severe, and is various in its progress, and uncertain in its duration, yielding and recurring at different periods. It is more severe, because the exciting causes have operated in a higher degree, or because the infant's constitution is unsound. It yields and recurs at different periods, because, after being somewhat removed, these causes are again allowed to operate. In order to prevent its recurrence, therefore, and to carry on the cure, you should strictly prevent every sudden transition or excess of light and temperature, while you assist the operations of nature by the application of stimulants and astringents to the eyes themselves, and of blisters to the back or nape of the neck.

IN the use of these remedies you have to consider the tender and delicate nature of the infant's constitution in general, and of his eyes in particular. You should not attempt to do every thing at once, but select your stimulants and astringents, and use them with caution; you should proportion your applications, as it were, till you bring the action of the remedy to suit the degree and obstinacy of the disease; and you should not tease the infant by the irritation of blisters, till you find that your other means are likely to fail.

3: But the third species of the disease is still more severe, having a swelling of the eye-lids, and a discharge of pus or purulent matter, ending sometimes either in specks upon the eye, or in its entire destruction. In this case, either the exciting causes have operated in a very high degree, or the infant's constitution is scrofulous, or inherits an infectious taint. But be this as it may, the local remedies are still stimulants and astringents;

a variety of these have been employed; but although this is a serious disease, beware of a multiplicity of applications,—impatience and anxiety often occasion the very consequences they seek to prevent.

Now, with regard to the general treatment of the infant under these affections, I have only to observe, that if he be deranged or debilitated by mis-management, or the operation of injurious powers, his health and energies must be restored. If his constitution be scrofulous, there is the more need of every invigorating power. If he inherits an infectious taint, it must be removed by its appropriated remedy. Reflect on these things, and on the observations I have offered concerning inflammation, and also on the state and condition of the infant, and you will be able to appreciate the effects of bleeding and purging, so often recommended and employed in affections of the eyes.

III. THE third and last division of this Discourse embraces the excoriations and inflammations of the infant's skin; and here I would observe, that the body is supplied with two skins, first the cuticle or scarf skin, which is a thin, semi-transparent, insensible membrane; and secondly, the true skin, which is plentifully supplied with blood-vessels and nerves, and therefore highly sensible; the smallest puncture producing pain, and a discharge of blood. When the scarf skin is removed, as for example, by friction or blistering, the true skin is inflamed, and discharges a serous fluid.

Thus you will understand the nature of those excoriations and inflammations which are so frequent in the early period of infancy. The scarf skin is actually removed, and the true skin is brought into view, presenting all the phænomena of inflammation, a keen redness, increased heat, and acute sensibility, the infant suffering the most excruciating pain.

IN the first Discourse, I endeavoured to point out the cause or causes of these evils. I ascribed them to the practice of cleansing the infant's skin immediately after birth, either to the friction employed in that process, or to the nature of the cleansing substance, or to the conjoint operation of these causes.

BUT these excoriations and inflammations have been attributed to other causes, to the acrimony of the urine and fecal discharge. It is true, that these causes frequently excoriate and inflame the infant's skin, but they do not produce the excoriations in question; for these excoriations take place soon after birth, and succeed the washing and cleansing process; and although the acrimony of the urine and fecal discharge might explain the excoriations of the groins, and the neighbouring parts, yet it will not account for the injuries of the breast, the arm-pits, the neck, and behind the ears.

Be convinced, therefore, that the early excoriations and inflammations of the infant's skin are produced by the means employed to free it from its supposed impurities, the matter found on it at birth; for the scarf skin of the newly born infant is a tender and delicate pellicle, and therefore obnoxious to injury from the slightest cause. The friction required to separate this adhering matter, even with the simplest and mildest fluid, will not fail to injure its texture; and how much more so, if a strong detergent substance be also employed?

BUT if this practice is still to be continued,—if the operations of nature, in separating this simple and innocent matter from the infant's skin, are to be altogether disregarded,—and if it is to be rudely removed by art, at the expence of destroying the texture of the skin, and producing inflammation, or acute and painful disease,—these injuries must be repaired, and nature assisted in healing the parts.

For this purpose, the removal of every irritating power, and the remedies in common use, are sufficient. If the injury be slight, if the scarf skin be only removed, bathe the part with lukewarm milk and water, dry it gently, and dust it with a mild absorbent powder; but if the injury be more severe, if the part be highly inflamed or ulcerated, bathe it with a gently astringent solution, and dress it with common cerate, or simple ointment. Under this treatment, if the energies of the infant's body be entire, the part will soon become whole.

This, however, is a material consideration; for if the infant has been mis-managed, if the energies of his system be feeble or diseased, the healing process will be slowly carried on. View, therefore, his general health, and consider the mode of his management; amuse not yourselves with a variety of applications to the part itself, but do away the operation of every power that has weakened him, and call in the

aid of every agent that can possibly restore his vigor, and the healthful œconomy of his system. Let the proper applications to the part itself be continued, and the healing process, hitherto protracted by weakness and disease, will be promoted and forwarded.

Thus you have both the local and general treatment of infantile excoriations and ulcerations. You perceive, that while you make the proper applications to the part itself, you are not to be regardless of the general state of the system. If it be in weakness or disease, you endeavour to restore it, for health and strength dispose to the healing of a sore, while weakness and disease are adverse to this process; beware, therefore, of every deranging or debilitating power; beware of this prescription, that “the bowels should be kept *open*.”* It is quite unnecessary, and can serve no good purpose; nay, it will defeat the very end you have in view; for it will derange

* Hamilton.

the œconomy of the infant's stomach and bowels, impoverish his body, weaken him in health, and increase his weakness in disease. It will therefore retard the healing process, while the health and energies of the system, duly preserved or restored, will bring the cure to a speedy termination.

IN the first of these Discourses I have shewn you how to preserve the health of your infants; in the second, how to remove their disease.

THE preservation of health consists in preventing the operation of the causes which produce disease. Attend, therefore, to the rules delivered in the first Discourse, and preserve the health and the life of your infants; neglect them, and witness their diseases and their death.

THE cure of disease comprises the investigation of its exciting cause or causes; the re-

moval or prevention of their action; and lastly, the administration of such powers as are fitted to aid the efforts of nature, in removing their effects, or in re-producing the healthful state. The Discourse which I have just closed is modelled on these principles:—it is an attempt to found the treatment of infantile diseases “upon the firm and indestructible base of a genuine philosophy.”

I HAVE confined my observations to the primary diseases of the infant, or those disorders which take place immediately, or soon after, his birth. His secondary diseases, or those which follow in their train, form a list terrific and melancholy to behold.

THROUGHOUT the whole of my progress, I have been more anxious to impress you with principles, than with practice. Of the latter you are too fond, and your faith is only in drugs; but expect not the cure of any disease, while its cause continues to operate.

I AM willing to make every allowance for your affections, and your fears; but let me admonish you of your prejudices and mistakes. Be assured, that when you see your infants carried down to the grave, the agents employed for their recovery are not always unconcerned in the event. “When we contemplate a church-yard, the earth of which is composed principally of the bodies of infants, it is natural for us to fancy, but surely, unreasonable to believe, that these beings were born for no other purpose than to die; or, that it is within the design of nature, that the pangs of production, on the part of the mother, should on that of her offspring be almost immediately succeeded by the struggle of dissolution. Fault must exist somewhere,—it cannot be in the providence of God: it must, therefore, attach to the improvidence and indiscretion of man.

“MORE fatal consequences originate from ignorance, than from voluntary crime. In-

fanticide, when it is perpetrated by the dagger of maternal desperation, or in the agony of anticipated disgrace, is a subject of astonishment and of horror; but, if an helpless victim be drugged to death, or poisoned by the forced ingurgitation of nauseous and essentially noxious potions, we lament the result merely, without thinking about the means which inevitably led to its occurrence.*

BE no longer “without thinking” then, on this tender and important subject. Fix your thoughts upon your infant, from the moment of his birth. “Preserve *him* from suffering by neglect, by the prejudices of ignorance, or by the immoderate officiousness of care.”† Let there be nothing found to hurt, nothing to offend, in the whole circle of his management. Consider him as a branch of yourself, and let nothing separate you and him, but the most dire necessity. Let him draw the

* Dr. John Reid.

† Gisborne, on the Duties of the Female Sex.

balm of life, and of health and strength, from your own fluids. "For, it clearly results, from a contemplation of the manner in which human feelings and ideas gain their connection, that frequent discomposure of the stomach, in the morning of life, may be instrumental in overcasting its meridian and its close with a cloud of misery, such as neither skill nor fortune can disperse."*

BUT should this "discomposure" actually take place; should your infant suffer disease by neglect or mismanagement, "by the prejudices of ignorance, or by the immoderate officiousness of care," see that he does not "sink under the oppression of pharmaceutical filth;"† for true it is, as Dr. Buchan observes, that "physic, in a variety of forms, is substituted for the only rational means of re-

* Dr. Beddoes.

† The greater number of infants, that die in the earlier months of their existence, undoubtedly consist of those who have sunk under the oppression of pharmaceutical filth." Dr. John Reid.

storing the child's health; the mischief begun by the nurse is completed by the doctor; and death comes, sooner or later, to put an end to the sufferings of the tortured victim."

THE END.



